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July 26, 2016

Ms. Maryam Tasnif-Abassi  
Department of Toxic Substances Control  
5796 Corporate Avenue  
Cypress, California 90630

SITE: FORMER AGRICULTURAL PARK  
7020 CREST AVENUE  
RIVERSIDE, CALIFORNIA

RE: SOIL SAMPLING AND EXCAVATION WORK PLAN

Dear Ms. Tasnif-Abassi:

This Work Plan is provided to describe upcoming activities that will be conducted at the former Riverside Agricultural Park located at 7020 Crest Avenue in Riverside, California. Based on soil sampling efforts conducted in November 2015, as documented in the *Former Riverside Agricultural Park Soil Sampling Report* dated January 6, 2016, it was determined that surface soil with polychlorinated biphenyl (PCB) concentrations above the cleanup goal of 0.22 milligrams per kilogram (mg/kg) was present at select locations. A description of previous remediation activities and planned future work activities are presented in this Work Plan.

### **Phase I Activities - 2009**

The scope of the first phase of soil removal was to excavate, remove, and properly dispose of soils containing PCB concentrations in excess of 50 mg/kg from locations determined by previous Site investigation efforts. In addition, soil samples were collected from select locations and analyzed for dioxins, furans and metals.

The remedial excavation alternative selected for the project included the removal, transportation, and proper disposal of PCB and metals-impacted soil. Between April and July 2009, Friends of the Riverside Airport LLC (FRA) removed soil containing PCB concentrations above 50 mg/kg. All remedial excavation activities were completed in July 2009. Excavation areas were concluded only after all confirmation samples from the excavation sidewalls and bottoms returned laboratory data results that verified the remaining soil was <50 mg/kg for PCBs.

All excavated soil with PCB concentrations at or above 50 mg/kg was transported offsite to the Waste Management, Incorporated, Kettleman Hills facility in Kettleman City, California. Soil containing PCB concentrations above 50 mg/kg at locations identified during previous Site

characterization efforts has been removed, transported offsite, and disposed of properly. A total of ~8,666 tons of PCB- and /or metals-impacted soil were transported offsite for disposal. Additional items removed from the site include brush debris (green waste), PCB-contaminated concrete, sewer pipe, and utility poles.

A total of 31 soil samples were analyzed for dioxin/furan congeners. Of the samples analyzed, 13 contained 2,3,7,8-TCDD Equivalent concentrations in excess of the health-based screening level for residential land-use (i.e., 4.5 picograms per gram [pg/g] or 4.5E-6 mg/kg). This health-based screening level represents the USEPA Regional Screening Level (RSL) established by Region IX (USEPA, 2008). The samples that contained the highest concentrations of 2,3,7,8-TCDD Eq. are TP-30E (4,817.7), TP-30S (8,372.8), and TP-30W (300.7). These three samples are co-located with PCB-impacted soil. Six additional samples exceeded the health-based screening level (B-67, TP-29, S-22+20E, TP-30N, TP-30B, and TP-103). These nine samples are co-located with PCB-impacted areas, and were removed during Phase 2 mass grading activities.

#### **Phase II Activities – 2013/2014**

The scope of the second phase of soil removal was to excavate, remove, and properly dispose of soils containing PCB concentrations in excess of 0.22 mg/kg from locations determined by previous site investigation efforts. In addition, soil samples were collected from select locations and analyzed for dioxins, furans and metals.

Between July 2013 and January 2014, FRA removed soil containing PCB concentrations above 0.22 mg/kg. Excavation areas were concluded only after all confirmation samples from the excavation sidewalls and bottoms returned laboratory data results that verified the remaining soil was <0.22 mg/kg for PCBs.

PCB-impacted soil (165,226.64 tons) generated during excavation activities was characterized as a non-hazardous waste and transported to the Waste Management, Inc. Azusa Land Reclamation facility in Azusa, California, for recycling. Additional materials that were removed from the Site included clean soil (30,782 tons), concrete (4,481.37 tons), green waste (422.26 tons), and asbestos-cement pipe (50.82 tons).

Thirteen dioxin/furan-impacted locations identified during Phase 1 activities were addressed by conducting additional excavation and confirmation sampling. Of the 50 confirmation samples collected, 17 were above the health-based screening level (4.5 pg/g). Consequently, additional soil was removed from these locations and more confirmation samples were collected. This procedure was repeated until all final confirmation sample results were below 4.5 pg/g.



### **Planned Remediation Activities for 2016**

Work activities will begin following approval of this work plan by DTSC and EPA and are anticipated to take place over a three month period. The work will be conducted based on four distinct types of areas or phases as described below:

- Cut Lots - lots where soil was removed to achieve the final grade in Tract 28987;
- Fill Lots - lots where soil was imported and compacted to achieve the final grade in Tract 28987;
- Outside Areas - areas outside of the planned Phase I housing development; and
- Final Lot Sampling - final confirmation soil sampling of all lots in Tract 28987 (Phase I) housing development.

Soil sampling and removal activities for each of these areas will proceed in the following manner:

#### **Cut Lots**

- Collect step-out soil samples in four directions at 25 feet and 50 feet from sample location exceeding PCB cleanup goal. Collect samples prior to soil removal. See Figure 1 for proposed sample locations.
- Remove soil around sample location exceeding cleanup goal to 1 foot deep and out to step-out sample limits (minimum 50 foot by 50 foot square excavation). Do not excavate within 2 feet of existing concrete curbs and gutters or driveway aprons on Jurupa Avenue, Clemente Court, and Drysdale Street. Leave curbs, gutters, and driveway aprons in place.
- Collect one bottom sample per 1,000 square feet with a minimum of three samples per removal area.
- Continue step-out sampling an additional 10 feet until results are below cleanup goal (0.22 mg/kg).
- Dispose of excavated soil offsite.

#### **Fill Lots**

- Collect step-out soil samples in four directions at 60 feet from sample location exceeding PCB cleanup goal. Collect samples prior to soil removal. See Figure 2 for proposed sample locations.
- Remove soil around sample location exceeding cleanup goal to 1 foot deep and out to step-out sample limits (minimum 120 foot by 120 foot square excavation). Do not excavate within 2 feet of existing concrete curbs and gutters or driveway aprons on Jurupa Avenue, Clemente Court, and Drysdale Street. Leave curbs, gutters, and driveway aprons in place.



- Collect one bottom sample per 1,000 square feet with a minimum of three samples per removal area.
- Continue step-out sampling an additional 10 feet until results are below cleanup goal.
- Dispose of excavated soil offsite.

#### Outside Areas

- Re-sample the outside areas on a 62.5 foot grid. If a historic result is within 2 feet of the grid point and is below the cleanup goal then no sample required. See Figure 3 for proposed sample locations.
- Collect step-out soil samples in four directions at 25 and 50 feet from sample location exceeding PCB cleanup goal. Collect samples prior to soil removal.
- Remove soil around sample location exceeding cleanup goal to 1 foot deep and out to step-out sample limits (minimum 50 foot by 50 foot square excavation).
- Collect one bottom sample per 1,000 square feet with a minimum of three samples per removal area.
- Continue step-out sampling an additional 10 feet until results are below cleanup goal.
- Dispose of excavated soil offsite.
- Note: a minimum of 5 feet of clean fill will be imported and placed over all lots included in the future Phase II development area which is still in the planning phase.

#### Tract 28987 Final Lot Sampling - See Figure 4 for proposed sample locations.

- For small lots, as defined in Table 1, collect 6 samples per lot (2 front yard, 2 side yard, and 2 back yard. Soil samples will not be collected in the location of a planned house.
- For large lots, as defined in Table 1, collect 8 samples per lot (2 front yard, 4 side yard, and 2 back yard. Soil samples will not be collected in the location of a planned house.
- For cut lots, collect only surface samples (0-6 inches).
- For fill lots, collect surface samples, two foot deep samples, and for fill 8 feet or deeper, 50% of the depth of the fill (not including concrete fill material).
- For all lots, collect one sample at a depth of 10 feet bgs from the future pad elevation in the rear of each lot. On lots where the depth of imported fill is 5 feet or less from existing ground surface (native material) to future pad elevation, collect a second sample at ½ the depth of native soil to the 10 foot depth. For example, if a lot has 4 feet of imported fill, collect samples at 7 and 10 feet bgs (or 3 and 6 feet into native material).
- For all lots, if any result exceeds the cleanup goal, remove soil in the area 2 feet deep and laterally to adjacent sample location meeting the cleanup goal, then resample.
- Continue removing and sampling until results are below cleanup goal.





- Dispose of excavated soil offsite.

#### Backfilling

Excavations created during these additional remediation activities will be backfilled and compacted. The import soil will come from a stockpile located south of Jurupa Avenue near the intersection of Jurupa Avenue and Van Buren Boulevard approximately 0.4 mile east of the site. This stockpile has been previously tested and meets the DTSC criteria for import fill soil. However, the soil will be resampled in accordance with DTSC import sampling criteria (12 samples for the first 5,000 cubic yards, then 1 sample for every 1,000 cubic yards thereafter) and the analytical results will be provided to DTSC for approval prior to beginning backfill activities.

#### Underground Utility Excavation

Excavated soil from underground utility excavations in street areas for water, sewer, storm drain, telephone, gas, electric, and cable television will be stockpiled, tested, and then disposed of offsite at one of the soil disposal facilities listed below. The utility trenches will be backfilled with clean imported material. This work will be conducted after receipt of the certificate of completion from DTSC.

#### Offsite Soil Disposal

- The proposed soil disposal facilities for soil containing PCBs below 50 mg/kg include the following:
  - Waste Management, Incorporated (WMI) facility at 2801 Madera Road, Simi Valley, California.
  - WMI Azusa Land Reclamation facility at 1211 W. Gladstone Street, Azusa, California.
  - WMI El Sobrante Landfill at 10910 Dawson Canyon Road, Corona, California.
- The proposed soil disposal facility for soil containing PCBs at or above 50 mg/kg is the Waste Management facility at 35251 Old Skyline Road, Kettleman City, California.
- Proposed haul route maps are provided as Figures 5 and 6.

#### Laboratory Analysis

The soil samples collected during confirmation sampling will be analyzed for PCBs using EPA Method 8082 with extraction by the Soxhlet method. The contract laboratory for this sampling effort will be Test America in Irvine, California. Chain of custody protocol will be followed for all samples. The chain of custody form accompanies the samples from the sampling locality to the laboratory, providing a continuous record of possession prior to analysis.



### Air Monitoring

Air monitoring will be performed during soil excavation activities according to Appendix E (Workplan for Air Monitoring) of the Frey Environmental *Revised Response Plan* dated June 19, 2006, and the TRC *Air Monitoring Plan Addendum* dated June 7, 2016 (Appendix A).

### Cleanup Goal

In accordance with the Response Plan that was approved by DTSC in 2006, all known PCBs found above the original cleanup level of 0.22 mg/kg in the November 2015 sampling event will be removed during this remediation. The 0.22 mg/kg used throughout the project is a conservative cleanup goal and lower than the level of 1 mg/kg, which EPA and DTSC considers health protective in a residential setting and falls within both agencies' acceptable risk range.

Confirmation samples will be collected during and after soil removal to ensure that the site is suitable for residential development, including sampling of each residential lot with up to eight sample locations. While it is possible that individual residual concentrations above 0.22 mg/kg may be found after the cleanup, the site will still be safe for residential use if the 95% upper confidence limit (UCL) concentrations for individual lots meet the cleanup goal of 0.22 mg/kg. A post-remediation risk evaluation will be developed in such cases for approval by DTSC.

Soil sampling results for samples collected after the initial drafting of this work plan are provided in Appendix B.

### Reporting

Following the completion of excavation activities, a summary report will be prepared.

- The report will include findings, tabulated laboratory results, sample location figures, and copies of manifests.
- A post-removal health risk analysis will be included in the report.

### General

TRC will provide field oversight of excavation activities and will perform confirmation soil sampling.

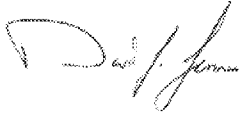
A site-specific health and safety plan will be prepared by TRC and will be available at the site for use by TRC personnel and agency representatives.

The sampling requirements described in this Work Plan can be modified in the field by the DTSC or EPA if necessary to meet project objectives.



If you have any comments, please contact David Lennon at (949) 341-7458.

Sincerely,



David Lennon  
Principal Consultant



Ross Surrency, PG  
Senior Project Geologist

Attachments: Figure 1 - Proposed Soil Sample Locations for Cut Lots  
Figure 2 - Proposed Soil Sample Locations for Fill Lots  
Figure 3 - Proposed Soil Sample Locations for Outside Areas  
Figure 4 - Proposed Soil Sample Locations for Final Lot Sampling  
Figure 5 - Soil Transportation Route to Van Buren Boulevard  
Figure 6 - Soil Transportation Route from Van Buren Boulevard to Highway 60  
Table 1 - Individual Lot Information  
Appendix A – Air Monitoring Plan Addendum  
Appendix B – Soil Sampling Memorandum

cc: Sara Ziff, EPA (electronic copy)  
Katherine Baylor, EPA (electronic copy)  
Greg Neal, DTSC (electronic copy)



LEGEND

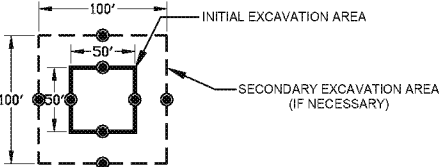
● Proposed Soil Sample Locations

1732 ● PCB Sample Location  
0.18 (Total PCBs < 0.22 mg/kg)

1731 □ PCB Sample Location  
131 (Total PCBs ≥ 0.22 mg/kg)

■ Cut Lots (39 total)

■ Fill Lots (70 total)



NOTES:

PCB concentrations shown represent the highest value from the two different laboratory extraction methods (Soxhlet and Method 3545).



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03/21/2016				DRAFT - ISSUED FOR REVIEW		12/17/15
DESIGNED	12/17/15	R.S.				
DRAWN	12/17/15	R.M.C.				

**CTRC**  
9848 RESEARCH DRIVE  
IRVINE, CALIFORNIA 92618  
(949) 727-9336

PROJECT:	234876.0000.0000
FACILITY:	FORMER AGRICULTURAL PARK
7120 CREST AVENUE	
RIVERSIDE, CALIFORNIA	

TITLE	PROPOSED SOIL SAMPLE LOCATIONS FOR CUT LOTS
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DATE	03/21/2016
REVISION	-
SHEET	1

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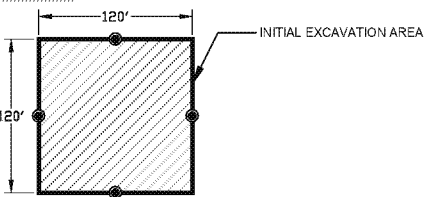
● Proposed Soil Sample Locations

1732 ● PCB Sample Location  
0.18 (Total PCBs < 0.22 mg/kg)

1731 □ PCB Sample Location  
131 (Total PCBs ≥ 0.22 mg/kg)

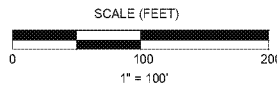
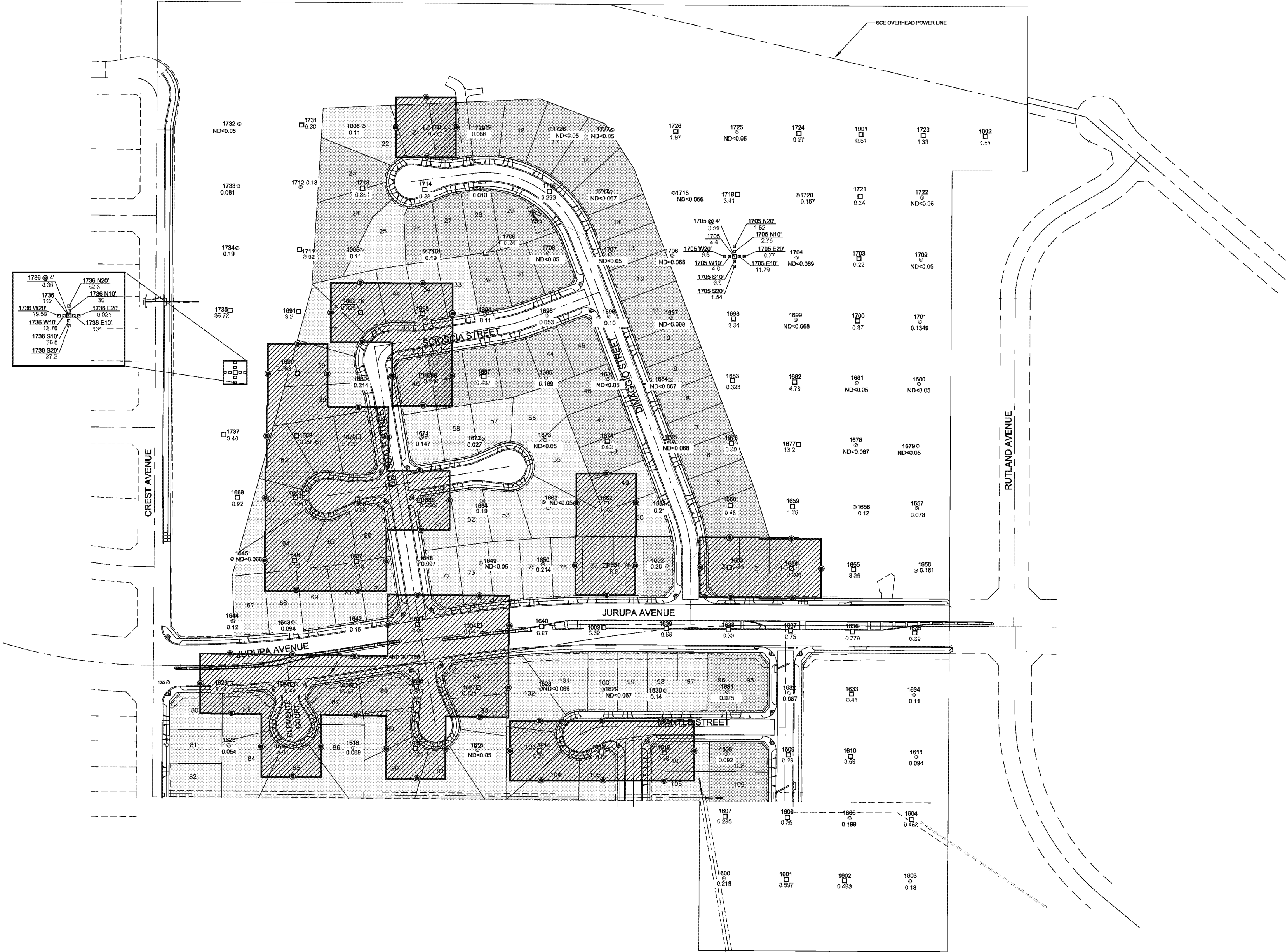
■ Cut Lots (39 total)

■ Fill Lots (70 total)



NOTES:

PCB concentrations shown represent the highest value from the two different laboratory extraction methods (Soxhlet and Method 3545).



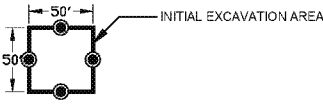
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BY: APP		DATE: 03/21/2018		DRAFT: ISSUED FOR REVIEW		DATE: 12/17/15	





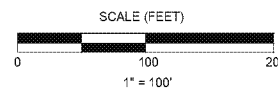
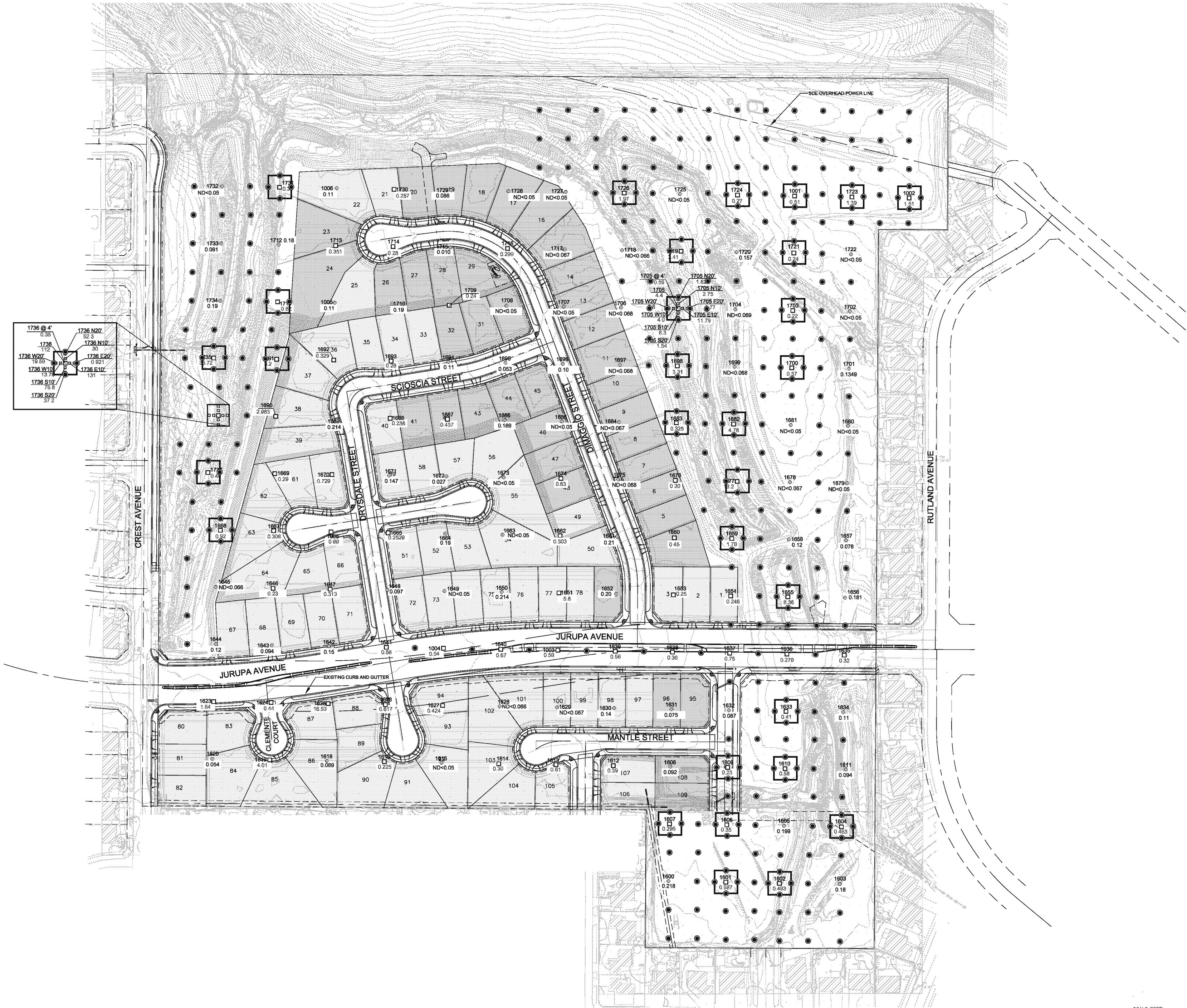
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- Proposed Soil Sample Locations  
(New 62.5 Grid)
- 1732 ● PCB Sample Location  
0.18 (Total PCBs < 0.22 mg/kg)
- 1731 □ PCB Sample Location  
131 (Total PCBs ≥ 0.22 mg/kg)
- Cut Lots (39 total)
- Fill Lots (70 total)



NOTES:

PCB concentrations shown represent the highest value from the two different laboratory extraction methods (Soxhlet and Method 3545).



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● Proposed Soil Sample Locations

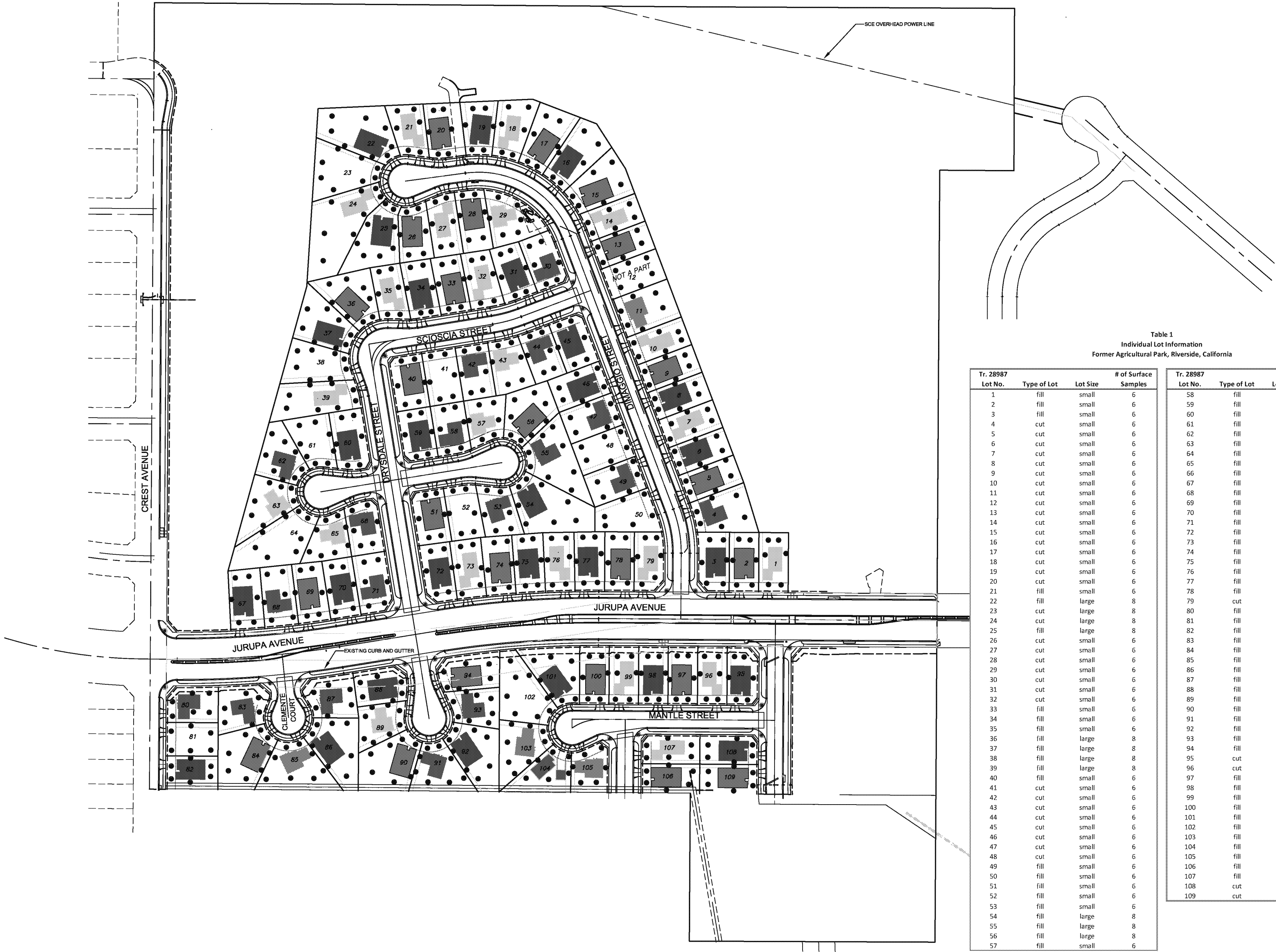
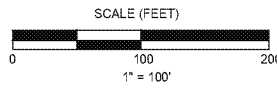


Table 1  
Individual Lot Information  
Former Agricultural Park, Riverside, California

Tr. 28987 Lot No.	Type of Lot	Lot Size	# of Surface Samples	Tr. 28987 Lot No.	Type of Lot	Lot Size	# of Surface Samples
1	fill	small	6	58	fill	small	6
2	fill	small	6	59	fill	small	6
3	fill	small	6	60	fill	small	6
4	cut	small	6	61	fill	large	8
5	cut	small	6	62	fill	large	8
6	cut	small	6	63	fill	large	8
7	cut	small	6	64	fill	large	8
8	cut	small	6	65	fill	large	8
9	cut	small	6	66	fill	small	6
10	cut	small	6	67	fill	small	6
11	cut	small	6	68	fill	small	6
12	cut	small	6	69	fill	small	6
13	cut	small	6	70	fill	small	6
14	cut	small	6	71	fill	small	6
15	cut	small	6	72	fill	small	6
16	cut	small	6	73	fill	small	6
17	cut	small	6	74	fill	small	6
18	cut	small	6	75	fill	small	6
19	cut	small	6	76	fill	small	6
20	cut	small	6	77	fill	small	6
21	fill	small	6	78	fill	small	6
22	fill	large	8	79	cut	small	6
23	cut	large	8	80	fill	small	6
24	cut	large	8	81	fill	small	6
25	fill	large	8	82	fill	small	6
26	cut	small	6	83	fill	small	6
27	cut	small	6	84	fill	large	8
28	cut	small	6	85	fill	large	8
29	cut	small	6	86	fill	large	8
30	cut	small	6	87	fill	small	6
31	cut	small	6	88	fill	small	6
32	cut	small	6	89	fill	large	8
33	fill	small	6	90	fill	large	8
34	fill	small	6	91	fill	large	8
35	fill	small	6	92	fill	large	8
36	fill	large	8	93	fill	large	8
37	fill	large	8	94	fill	small	6
38	fill	large	8	95	cut	small	6
39	fill	large	8	96	cut	small	6
40	fill	small	6	97	fill	small	6
41	cut	small	6	98	fill	small	6
42	cut	small	6	99	fill	small	6
43	cut	small	6	100	fill	small	6
44	cut	small	6	101	fill	large	8
45	cut	small	6	102	fill	large	8
46	cut	small	6	103	fill	large	8
47	cut	small	6	104	fill	small	6
48	cut	small	6	105	fill	small	6
49	fill	small	6	106	fill	small	6
50	fill	small	6	107	fill	small	6
51	fill	small	6	108	cut	small	6
52	fill	small	6	109	cut	small	6
53	fill	small	6				
54	fill	large	8				
55	fill	large	8				
56	fill	large	8				
57	fill	small	6				



PROJECT: 234876.0000.0000  
FACILITY: FORMER AGRICULTURAL PARK  
7120 CREST AVENUE  
RIVERSIDE, CALIFORNIA

PROPOSED SOIL SAMPLE LOCATIONS  
FOR FINAL LOT SAMPLING

FILE NAME: F:\RA RIVERSIDE\SP-RE\2015.dwg  
DATE: 03/21/2016  
REVISION: -  
SHEET: 4 OF 4

03/21/2016  
DESIGNED  
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DATE  
R.S.

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IRVINE, CALIFORNIA 92618  
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# LEGEND

→ Soil Transportation Route



SCALE (FEET)



## NOTE:

Map provided by Google Earth Professional,  
dated 2/9/2016.



PROJECT: 167991

FACILITY:

FRIENDS OF THE RIVERSIDE  
AIRPORT, LLC  
7020 CREST AVENUE  
RIVERSIDE, CALIFORNIA

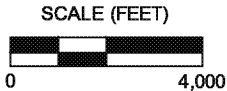
SOIL TRANSPORTATION ROUTE TO  
VAN BUREN BOULEVARD

FIGURE 5



LEGEND

→ Soil Transportation Route



NOTE:

Map provided by Google Earth Professional, dated 6/7/12.



PROJECT: 167991

FACILITY:

FRIENDS OF THE RIVERSIDE  
AIRPORT, LLC  
7020 CREST AVENUE  
RIVERSIDE, CALIFORNIA

SOIL TRANSPORTATION ROUTE  
FROM VAN BUREN BOULEVARD  
TO HIGHWAY 60

FIGURE 6

**Table 1**  
**Individual Lot Information**  
**Former Agricultural Park, Riverside, California**

Tr. 28987 Lot No.	Type of Lot	Lot Size	# of Surface Samples	Tr. 28987 Lot No.	Type of Lot	Lot Size	# of Surface Samples
1	fill	small	6	58	fill	small	6
2	fill	small	6	59	fill	small	6
3	fill	small	6	60	fill	small	6
4	cut	small	6	61	fill	large	8
5	cut	small	6	62	fill	large	8
6	cut	small	6	63	fill	large	8
7	cut	small	6	64	fill	large	8
8	cut	small	6	65	fill	large	8
9	cut	small	6	66	fill	small	6
10	cut	small	6	67	fill	small	6
11	cut	small	6	68	fill	small	6
12	cut	small	6	69	fill	small	6
13	cut	small	6	70	fill	small	6
14	cut	small	6	71	fill	small	6
15	cut	small	6	72	fill	small	6
16	cut	small	6	73	fill	small	6
17	cut	small	6	74	fill	small	6
18	cut	small	6	75	fill	small	6
19	cut	small	6	76	fill	small	6
20	cut	small	6	77	fill	small	6
21	fill	small	6	78	fill	small	6
22	fill	large	8	79	cut	small	6
23	cut	large	8	80	fill	small	6
24	cut	large	8	81	fill	small	6
25	fill	large	8	82	fill	small	6
26	cut	small	6	83	fill	small	6
27	cut	small	6	84	fill	large	8
28	cut	small	6	85	fill	large	8
29	cut	small	6	86	fill	large	8
30	cut	small	6	87	fill	small	6
31	cut	small	6	88	fill	small	6
32	cut	small	6	89	fill	large	8
33	fill	small	6	90	fill	large	8
34	fill	small	6	91	fill	large	8
35	fill	small	6	92	fill	large	8
36	fill	large	8	93	fill	large	8
37	fill	large	8	94	fill	small	6
38	fill	large	8	95	cut	small	6
39	fill	large	8	96	cut	small	6
40	fill	small	6	97	fill	small	6
41	cut	small	6	98	fill	small	6
42	cut	small	6	99	fill	small	6
43	cut	small	6	100	fill	small	6
44	cut	small	6	101	fill	large	8
45	cut	small	6	102	fill	large	8
46	cut	small	6	103	fill	large	8
47	cut	small	6	104	fill	small	6
48	cut	small	6	105	fill	small	6
49	fill	small	6	106	fill	small	6
50	fill	small	6	107	fill	small	6
51	fill	small	6	108	cut	small	6
52	fill	small	6	109	cut	small	6
53	fill	small	6				
54	fill	large	8				
55	fill	large	8				
56	fill	large	8				
57	fill	small	6				

**APPENDIX A**  
**AIR MONITORING PLAN ADDENDUM**



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July 26, 2016

Ms. Maryam Tasnif-Abassi  
Department of Toxic Substances Control  
5796 Corporate Avenue  
Cypress, California 90630

SITE: FORMER AGRICULTURAL PARK  
7020 CREST AVENUE  
RIVERSIDE, CALIFORNIA

RE: AIR MONITORING PLAN ADDENDUM

Dear Ms. Tasnif-Abassi:

This document is intended to serve as an addendum to the *Workplan for Air Monitoring* provided as Appendix E in the Frey Environmental *Revised Response Plan – Excavation of Soils Containing PCBs* dated June 19, 2006 (see Attachment 1). This addendum describes proposed methods to conduct upcoming air monitoring during soil removal efforts at the former Riverside Agricultural Park located at 7020 Crest Avenue in Riverside, California. Based on soil sampling efforts conducted in November 2015, as documented in the *Former Riverside Agricultural Park Soil Sampling Report* dated January 6, 2016, it was determined that surface soil with polychlorinated biphenyl (PCB) concentrations above the cleanup goal of 0.22 milligrams per kilogram (mg/kg) was present at select locations.

In 2009, Phase I of the remediation effort was conducted including excavation, removal, and proper disposal of soils containing PCB concentrations in excess of 50 mg/kg from locations determined by previous Site investigation efforts. In addition, soil samples were collected from select locations and analyzed for dioxins, furans and metals. All excavated soil with PCB concentrations at or above 50 mg/kg was transported offsite to the Waste Management, Incorporated, Kettleman Hills facility in Kettleman City, California. Soil containing PCB concentrations above 50 mg/kg at locations identified during previous Site characterization efforts has been removed, transported offsite, and disposed of properly. A total of ~8,666 tons of PCB- and /or metals-impacted soil were transported offsite for disposal. Additional items removed from the site include brush debris (green waste), PCB-contaminated concrete, sewer pipe, and utility poles.

In 2013/2014, Phase II of the removal effort was conducted including the excavation, removal, and disposal of soils containing PCB concentrations in excess of 0.22 mg/kg from locations

determined by previous site investigation efforts. In addition, soil samples were collected from select locations and analyzed for dioxins, furans and metals. PCB-impacted soil (165,226.64 tons) generated during excavation activities was characterized as a non-hazardous waste and transported to the Waste Management, Inc. Azusa Land Reclamation facility in Azusa, California, for recycling. Additional materials that were removed from the Site included clean soil (30,782 tons), concrete (4,481.37 tons), green waste (422.26 tons), and asbestos-cement pipe (50.82 tons).

Phase III work activities began on March 22, 2016 following approval of the *Soil Sampling and Excavation Work Plan* (TRC, 2016) by DTSC and EPA and are ongoing. The work is being conducted based on four distinct types of areas or phases as described below:

- Cut Lots - lots where soil was removed to achieve the final grade in Tract 28987;
- Fill Lots - lots where soil was imported and compacted to achieve the final grade in Tract 28987;
- Outside Areas - areas outside of the planned Phase I housing development; and
- Final Lot Sampling - final confirmation soil sampling of all lots in Tract 28987 (first phase of housing development).

Please refer to the *Soil Sampling and Excavation Work Plan* (TRC, 2016) for details regarding the sampling and excavation efforts planned for each area.

### **Background**

Construction activities, including excavation and soil loading, are capable of generating soil-derived dust. Suspension and dispersion of dust containing PCBs can be transported to nearby receptors where exposures may potentially occur. While the specific dust mitigation measures to be implemented during excavation and soil loading are intended to reduce the potential for dust generation, a program of measurement and verification is required to address the following objectives:

- Evaluate the influence of excavation activities on downwind dust concentrations,
- Identify the need for additional mitigation measures and/or work stoppage based on the dust levels observed, and
- Confirm that the concentrations of PCBs in air are below levels that are protective of public health.

Measurement of PCB concentrations in air requires the use of air sampling equipment and subsequent laboratory analysis. While air sampling approaches provide reliable measurements for presence of PCBs in air, the typical turnaround time for receipt of laboratory analytical data ranges from several days to weeks. Consequently, standard air sampling approaches may not identify an exceedance of a health-based concentration until days or weeks after the fact. In consideration of this limitation, the proposed air monitoring program is designed to provide both



the efficacy of dust mitigation measures and to confirm that the work activities are performed in a manner that is protective of public health.

Real-time particulate monitoring provides more instantaneous feedback regarding the efficacy of the dust mitigation measures, but does not provide a direct measurement of the PCB concentration in air. Thus, the establishment of a health-based dust concentration limit (DCL) which is measureable by real-time air monitoring equipment is critical to preventing public exposures. The results of the particulate monitoring provide advance notice when dust levels at the project fenceline approach or exceed the DCL. This allows for prompt action to address and mitigate the condition such as increasing the frequency or volume of water applied to the work area or under extreme conditions, work stoppage. Development of a health-protective DCL is an essential element of the real-time particulate monitoring program. Additional details regarding the methodology utilized to establish a health-based DCL are provided in the following section.

### **Health-Based Dust Concentration Limit Determination**

Derivation of the health-based DCL assumes that the concentration of PCBs in dust is proportional to PCB concentration detected in soil. The equation that describes the calculation of the health-based DCL is provided below:

$$DCL = REL_{PCB} / [C_{PCB} \times CF]$$

Where:

DCL = Health-Based Dust Concentration Limit ( $\mu\text{g}/\text{m}^3$ )

$REL_{PCB}$  = Health-Based Reference Exposure Level for PCBs in Air ( $\mu\text{g}/\text{m}^3$ )

$C_{PCB}$  = Maximum Concentration of PCBs in Soil ( $\text{mg}/\text{kg}$ )

CF = Unit Conversion Factor ( $1\text{E-}6 \text{ kg soil}/\text{mg soil}$ )

Based on the laboratory analytical results of soil samples collected at the Site, the maximum PCB concentration remaining is 500 mg/kg (Sample O2289-W25 at 0.5 fbg). In order to calculate the health-based DCL, a value representing the health-based reference exposure level for PCBs in air is required. Since the anticipated project duration is on the order of months as opposed to years, a chronic, non-cancer endpoint reference exposure level is a conservative and health-protective value to use for this analysis. The United States Environmental Protection Agency (USEPA) definition of a chronic exposure is one that occurs over a period of 7 years or longer. A summary of potentially applicable health-based reference exposure levels for PCBs in air in a residential setting is provided below:



Reference Exposure Level ( $\mu\text{g}/\text{m}^3$ )	Basis for REL Value	Source of REL
7.0E-2	Chronic, Non-Cancer Endpoint (Original Value from Frey, 2006)	Integrated Risk Information System Oral Reference Dose for Aroclor 1254; extrapolated to Reference Concentration in air (USEPA, 2004)
8.0E-2	Chronic, Non-Cancer Endpoint	Human Health Risk Assessment Note 3 Table, DTSC-modified Screening Level Reference Concentration for Aroclor 1254 (DTSC, 2016)
8.0E-2	Chronic, Non-Cancer Endpoint (route-to-route extrapolation from Oral Reference Dose [2E-5 mg/kg-day])	Integrated Risk Information System Oral Reference Dose for Aroclor 1254; extrapolated to Reference Concentration in air (USEPA, 2015)
1.2E-1	Sub-Chronic, Non-Cancer Endpoint (route-to-route extrapolation from Oral Minimum Risk Level [3E-5 mg/kg-day])	Intermediate (15 to 364 days) Oral Minimum Risk Level for PCBs (Aroclor 1254); extrapolated to Reference Concentration in air (ATSDR, 2000)
<b>Notes:</b> DTSC, 2016. California Department of Toxic Substances Control. Human and Ecological Risk Office. Human Health Risk Assessment Note 3 Tables. Reference Concentration and Residential Air Screening Level for High Risk PCBs (e.g., Aroclor 1254). USEPA, 2004. United States Environmental Protection Agency. Region 9 Preliminary Remediation Goal Table, Air-H20, Reference Exposure Level extrapolated from Oral Reference Dose of 2E-5 mg/kg-day for Unspecified Mixture of PCBs, High Risk (e.g., Aroclor 1254) based on body weight of 70 kg and 20 m <sup>3</sup> /day inhalation rate. USEPA, 2015. United States Environmental Protection Agency. Integrated Risk Information System. Reference Exposure Level Extrapolated from Oral Reference Dose for Aroclor 1254 of 2E-5 mg/kg-day based on updated Default Exposure Factors per USEPA OSWER Directive 9200.1-120 dated February 6, 2014 (i.e., body weight of 80 kg and 20 m <sup>3</sup> /day inhalation rate) for residential exposure. ATSDR, 2000. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Polychlorinated Biphenyls (PCBs). November.		

The potentially applicable reference exposure levels for intermediate to chronic, non-cancer effects range from 0.07 to 0.12  $\mu\text{g}/\text{m}^3$ . These values are consistent with the reference exposure



level utilized in the original dust action level calculation (Frey, 2006). For the purpose of calculating an updated DCL for Phase III remediation activities, the reference exposure level of  $0.07 \mu\text{g}/\text{m}^3$  was selected to derive the health-based DCL.

Table 1 provides an overview of the health-based DCL calculation and associated assumptions and references. Based on the current maximum PCB concentration detected in soil and the chronic reference exposure level, the calculated health-based DCL for Phase III activities is approximately  $140 \mu\text{g}/\text{m}^3$ . Dust levels below this value would not result in PCB concentrations in air above the reference exposure level of  $0.07 \mu\text{g}/\text{m}^3$ . The calculated health-based DCL is considered very conservative as it was derived based on a chronic (7 years or longer) reference exposure level and the maximum PCB concentration detected in soil. Use of the sub-chronic REL and average PCB concentration in soil would yield a higher health-based DCL value.

Assuming that the concentration of PCBs in air were equal to the PCB reference exposure level of  $0.07 \mu\text{g}/\text{m}^3$  for the three month duration of the Phase 3 excavation activities, the upper-bound lifetime incremental cancer risk is calculated as outlined below:

$$\text{Risk} = \text{IUR} \times \text{CA} \times \text{ET} \times \text{EF} \times 1/\text{AT}$$

Where:

IUR = Inhalation Unit Risk Factor ( $5.7\text{E-}4$  per  $\mu\text{g}/\text{m}^3$ )

CA = PCB concentration in air ( $0.07 \mu\text{g}/\text{m}^3$ )

ET = Exposure Time (8 hours/day)

EF = Exposure Frequency (3 months or 91 days)

AT = Averaging Time (70 years  $\times$  365 days/year  $\times$  24 hours/day or 613,200 hours)

Based on these parameters, the upper-bound lifetime incremental cancer risk associated with potential exposure to PCBs in air is approximately  $5 \times 10^{-8}$ . Consequently, the health-based DCL is also protective of the cancer endpoint at an acceptable lifetime incremental cancer risk range of  $1 \times 10^{-6}$  to  $1 \times 10^{-4}$ . It is noted that the project duration could extend for a period as long as six months due to unforeseen delays and other factors; however, this would not alter the risk calculation. The actual time spent conducting earth moving operations is still anticipated to be three months.

Since the health-based DCL is higher than the  $50 \mu\text{g}/\text{m}^3$   $\text{PM}_{10}$  concentration limit described in SCAQMD Rule 403 (as the difference between upwind and downwind samples) for fugitive dust controls, this lower value will represent the dust action level for the Phase III activities. It should be noted that the  $50 \mu\text{g}/\text{m}^3$   $\text{PM}_{10}$  concentration limit described in SCAQMD Rule 403 is also lower than the health-based DCL if this value were adjusted to account for the lower body weight and inhalation rate for a child.

Monitoring for dioxins/furans was contemplated in the 2006 Response Plan. However, at the established dust action level ( $50 \mu\text{g}/\text{m}^3$ ) for the Phase III cleanup, the maximum predicted concentration of dioxins in air using the maximum detected concentration in soil ( $4.5\text{E-}6 \text{ mg}/\text{kg}$ )





after Phase II cleanup) would be  $2\text{E-}13 \text{ mg/m}^3$  (see the equation above). This value is well below the Community Action Level of  $7\text{E-}9 \text{ mg/m}^3$ , and thus dioxin/furan sampling is not needed.

It should be noted that upon completion of additional sampling that is currently underway, the health-based DCL calculation will be re-evaluated based on the maximum PCB concentration in soil. If the resulting health-based DCL is determined to be lower than  $50 \text{ }\mu\text{g/m}^3$ , the lower value will be used as the dust action level during Phase III activities.

### **Proposed Air Monitoring Activities to be Performed During Phase III**

Air monitoring will be performed during earth moving activities during Phase III of the remedial effort. Air monitoring activities will include wind monitoring, particulate monitoring for dust, and monitoring for PCB concentrations in air.

#### Wind Monitoring

Wind speed and direction will be monitored with a Davis Vantage Pro 2 weather station. The weather station is battery operated and will continuously record wind speed and direction during excavation activities. Analog data will be transmitted from the wind speed and direction sensors to a data logger which will be downloaded at the end of each week.

#### Particulate Monitoring

Air monitoring for particulates ( $\text{PM}_{10}$ ) will be conducted using Met One Instruments E-BAM portable beta attenuation monitors which are Federal Equivalent Method (FEM)-approved monitors. The monitors will be operated continuously during periods of soil disturbance on days where earth moving operations occur (maximum of 8 hours per day). One upwind monitor and three downwind monitors will be placed at the perimeter of the property to provide continuous monitoring of particulate matter. Field calibration checks will be performed on a weekly basis using a BGI deltaCal<sup>®</sup> air flow calibrator. The calibration checks will include temperature, barometric pressure, and flow rate. Portable solar panels will be used to charge a 12-volt battery which in turn provides power to each of the E-BAMs, so power interruptions should not be a concern. One spare E-BAM monitor will be stored onsite in the event of equipment failure of one of the four onsite operating units. E-BAM monitors in need of repair will be returned to the equipment vendor for repair or replacement.

As previously described, the health-based DCL is approximately  $140 \text{ }\mu\text{g/m}^3$ . Since the SCAQMD Rule 403  $\text{PM}_{10}$  concentration is lower than the health-based value, a value of  $50 \text{ }\mu\text{g/m}^3$  is selected as the dust action level for Phase III activities. This action level is measured as the difference between the upwind and downwind monitors over a one-hour period. In the event that the difference between the upwind and downwind monitoring is greater than  $50 \text{ }\mu\text{g/m}^3$ , additional dust mitigation corrective measures will be implemented. Potential corrective measures to be considered range from increasing the water application rate and/or frequency, to the suspension of work activities. In addition to continuous logging by the E-BAM units, a TRC technician will hand record hourly dust concentrations on a field data sheet to determine if additional dust mitigation corrective measures are warranted.



It should be noted that the dust action level of  $50 \mu\text{g}/\text{m}^3$  is protective of public health with regard to potential exposures to PCBs in air during Phase III cleanup, as it is more stringent than the conservative health-based DCL of  $140 \mu\text{g}/\text{m}^3$  as discussed above. By way of comparison, the dust action level utilized during Phase I and Phase II activities was  $7 \mu\text{g}/\text{m}^3$  (Frey, 2006). The lower dust action level utilized during Phase I and II activities reflected the higher concentrations of PCBs in soil that existed at the time the Phase I work was performed. The higher dust action level for Phase III activities is reflective of the significant reduction in the maximum PCB concentrations in soil that were present during the Phase I and Phase II soil removal efforts conducted in 2009 and 2013/2014.

### PCB Air Monitoring

Monitoring for PCBs in air will be performed in accordance with EPA Method TO-10A. Air pumps capable of moving 1 to 5 liters per minute (L/min) of air will be fitted with sorbent tube polyurethane foam (PUF) sampling devices. A pre-filter will not be placed on the PUF sampling devices. The pumps will be placed adjacent to (co-located with) each of the downwind E-BAM monitors and will be operated during earth moving activities (maximum of 8 hours per day). A minimum of three samples per day will be collected on days when earth moving activities are occurring. The flow rate of the air pumps will be measured daily using a MesaLabs Defender 510 flow calibrator. The samples will be sent to EMSL Analytical in Cinnaminson, New Jersey for laboratory analysis for PCBs. The results of the PCB monitoring will be compared to the sub-chronic PCB reference exposure level to confirm that concentrations of PCBs in air are below levels that are protective of public health. Laboratory reports will be reviewed to verify that the TO-10A method detection limit is lower than the proposed dust action level of  $50 \mu\text{g}/\text{m}^3$ .

In summary, this Air Monitoring Plan Addendum is intended to supplement the original Air Monitoring Plan that was used for Phase I and Phase II activities (Frey, 2006). In recognition that the current maximum concentration of PCBs in soil is at least an order of magnitude lower than the concentrations that were present prior to the completed removal activities, the health-based DCL was re-evaluated. The results of the analysis indicate that, based on the current maximum concentration of PCBs in soil, the health-based DCL is higher than the SCAQMD Rule 403  $\text{PM}_{10}$  concentration ( $50 \mu\text{g}/\text{m}^3$ ). Consequently, the dust action level to be utilized during Phase III activities is  $50 \mu\text{g}/\text{m}^3$ .

A minimum of three downwind air samples will be collected over a period of up to 8 hours during each day that excavation, loading or earth-moving activities occur. The results of the downwind air sampling will be compared to the sub-chronic PCB reference exposure level to confirm that concentrations of PCBs in air are below levels that are protective of public health. The air monitoring and sampling results will be reviewed on a daily basis to confirm the adequacy of the dust mitigation measures employed during Phase III activities.



Ms. Maryam Tasnif-Abassi  
Former Agricultural Park – Air Monitoring Plan Addendum  
July 26, 2016  
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If you have any comments, please contact David Lennon at (949) 341-7458.

Sincerely,



David Lennon  
Principal Consultant



Ross Surrency, PG  
Senior Project Geologist

Attachments:

Table 1 – Calculation of Health-Based Dust Concentration Limit (DCL) for PCBs  
Attachment 1 - Workplan for Air Monitoring from July 2006 Revised Response Plan

cc: Jason Low SCAQMD (electronic copy)  
Katherine Baylor, EPA (electronic copy)  
Greg Neal, DTSC (electronic copy)



**Table 1**  
**Calculation of Health-Based Dust Concentration Limit for PCBs**  
**Phase III Air Monitoring Plan Addendum**  
**Former Agricultural Park**  
**Riverside, California**

<b>Equation</b>		
Health-Based Dust Concentration Limit = $REL / (C_{PCB\ max} \times CF)$		
<b>Symbol and Description</b>	<b>Units</b>	<b>Value</b>
REL = Chronic, Non-Cancer Reference Concentration (Frey, 2006)	$\mu g/m^3$	0.07
$C_{PCB\ max}$ = Maximum Concentration of PCBs in soil <sup>[1]</sup>	mg/kg	500
$C_{PCB\ max}$ = Maximum Concentration of PCBs in soil <sup>[1]</sup>	$\mu g/kg$	500,000
CF = Unit Conversion Factor	kg soil/mg soil	1.00E-06
Health-Based Dust Concentration Limit	mg dust/ $m^3$ air	0.14
Health-Based Dust Concentration Limit	$\mu g$ dust/ $m^3$ air	140
<b>Notes:</b>		
REL = Reference Exposure Level for PCBs in Air		
Frey, 2006. REL from Revised Response Plan. Reference Exposure Level Extrapolated from Chronic Oral Reference Dose for Aroclor 1254 of 2E-5 mg/kg-day based on body weight of 70 kg and 20 $m^3$ /day inhalation rate for residential exposure.		
<sup>[1]</sup> Maximum PCB concentration in soil (500 mg/kg) in Sample O2289-W25 at 0.5 fbg (4/25/16)		
Health-Based Dust Concentration Limit represents the lowest concentration of dust in air that would not result in an exposure above the REL at the FRA Ag Park Fenceline.		
$\mu g/kg$ = micrograms per kilogram		
mg/kg = milligrams per kilogram		
$\mu g/m^3$ = micrograms per cubic meter of air		
mg/ $m^3$ = milligrams per cubic meter of air		

**ATTACHMENT 1**  
**WORKPLAN FOR AIR MONITORING FROM**  
**JULY 2006 REVISED RESPONSE PLAN**

**APPENDIX E**  
**WORKPLAN FOR AIR MONITORING**

FREY

06 October 2005  
revised 14 December 2005  
AGE Project No.: RC684E7.1443

Mr. Robert Heller  
Project Manager  
Waste Management, Inc.  
3738 East Rolling Green Lane  
Orange, California 92867

**Subject:      Work Plan for Air Monitoring As Required To Comply with the  
Response Plan and South Coast Air Quality Management District  
Rule 403- Fugitive Dust at Agricultural Park  
7020 Crest Avenue, Riverside, California**

Dear Mr. Heller:

A work plan to ensure the quality and accuracy of air monitoring conducted at the subject site is enclosed. A copy of this work plan will be maintained on-site for reference and guidance. If you have any questions, please contact me at (714) 529-0200.

Sincerely,

*Advanced GeoEnvironmental, Inc.*

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Dennis Michael Delaney  
Director, Air Quality Division

Work Plan

# **WORK PLAN FOR AIR MONITORING AS REQUIRED TO COMPLY WITH THE RESPONSE PLAN AND SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 403- FUGITIVE DUST**

**Agricultural Park  
7020 Crest Avenue, Riverside, California**

## **1.0 INTRODUCTION**

Waste Management, Inc. has been contracted by the Friends of the Riverside Airport (FRA) to provide removal of hydrocarbon-impacted soil at the agricultural park located in the vicinity of the Santa Ana Riverbed and Crest Avenue in the City of Riverside, California. An Assessment and survey of this property has shown the soil to be impacted with polychlorobiphenyls (PCBs). Dioxins and furans, byproducts of PCB degradation, are also considered chemicals of potential concern (COPCs). Therefore, under the oversight of the Department of Toxic Substance Control (DTSC) and the South Coast Air Quality Management District (SCAQMD), environmental monitoring during excavation is required. Monitoring will be conducted in accordance with procedures outlined in SCAQMD Rule 403 – Fugitive Dust. This monitoring includes, but may not be limited to: meteorological monitoring of wind conditions and relative humidity; real time particulate monitoring both upwind and downwind of the workface during excavation and grading; and monitoring for airborne concentrations of PCBs.

In response to the requirements of this contract, *Advanced GeoEnvironmental, Inc.* (AGE) has developed an Air Quality Management Program for Waste Management, Inc., designed to ensure compliance with the approved Response Plan (RP) as well as South Coast Air Quality Management District (SCAQMD) Rule 403 – Fugitive Dust. For the purposes of this document, Fugitive Dust is identified as airborne particulate matter, with an aggregate particle diameter of 10 microns or less (PM<sub>10</sub>), which has been entrained into the air through anthropogenic (man-made) pathways.

Under the provision of South Coast Air Quality Management District SCAQMD Rule 403 – Fugitive Dust, owners/operators of facilities (or projects) are required to limit emissions of fugitive dust generated by their activities. Preparation and submission of a Fugitive Dust Plan and ambient air monitoring are required for projects that cover an aggregate area exceeding 50 acres. Since this area is far less than 50 acres, notification of the SCAQMD and submission of a monitoring plan for approval are not required. However, all contractors operating within the jurisdiction of the SCAQMD are required to comply with the emission controls and limitations specified in the Rule.

The purpose of this Work Plan is to outline the procedures to be followed in order to comply with the monitoring protocol presented in the SCAQMD Rule 403 Implementation Plan, as well as the action levels for worker and public safety stipulated



in the RP. Monitoring will complement the voluntary Fugitive Dust Plan (separate cover) prepared for this project, to demonstrate compliance with the Rule.

## 2.0 BACKGROUND

### 2.1 SITE SETTING

The site consists of approximately 62 acres of undeveloped land, with a simple roofed structure positioned near its center. The site is relatively flat, with a mean elevation of approximately 740 feet above mean sea level (msl). It is surrounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the Chino Hills and Santa Ana Mountains to the west and south. Crest Avenue borders the property to the west, with residential developments to the west of the road. The area to the south and east is developed with residential homes. The Santa Ana River Wash bounds the site to the north.

The site was used as a sewage treatment plant in the early 1940's by the United States Army. The Arlington Utility Company retained management of the plant from the mid-1940's through 1961, at which time the City of Riverside took control of the property and operated the plant until it was decommissioned in 1965. The City retained ownership of the property, and used the two oval-shaped basins as brine ponds through the early 1970's.

In 2003, the City entered into a contract for redevelopment with the FRA. During demolition of existing structures, fluids were discovered in abandoned tanks that were found to contain PCB's. Environmental investigation has determined that PCB-contaminated soil exists over approximately 45 acres of the site, with soil concentrations ranging from 0.009 milligrams per kilogram (mg/kg) to 9,560 mg/kg. Demolition and redevelopment were discontinued until the contamination could be remediated.

### 2.2 FUGITIVE DUST CONTROL REQUIREMENTS

The SCAQMD adopted Rule 403 – Fugitive Dust in 1976. Amended in 1997, the Rule regulates anthropogenic fugitive dust sources within the jurisdiction of the SCAQMD, requiring facilities with the potential to emit or generate fugitive dust to take appropriate action to prevent, reduce, or mitigate those emissions. Portions of the South Coast Air Basin are designated non-attainment for PM<sub>10</sub> (particulate matter with an aerodynamic diameter of 10 microns or less), which makes control of localized emissions critical. Rule 403(d)(4) states: "A person shall not cause or allow PM<sub>10</sub> levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high volume particulate matter samplers or other EPA-approved equivalent method for PM<sub>10</sub> monitoring. When sampling is conducted, samplers shall be:

- (A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), part 50, Appendix J, or appropriate EPA-published documents for EPA-approved equivalent methods for PM<sub>10</sub>.
- (B) Reasonably placed upwind and downwind of key activity areas and close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized."

Protocol established for Rule 403 compliance testing require simultaneous sampling upwind and downwind of a suspected source for a period of five hours. These requirements are intended to provide a means to isolate the potential emissions from the monitored source, and identify the level of concentration of those emissions. "Upwind" and "downwind" are meteorologically-derived terms: upwind identifies a position relative to the potential source of emissions TOWARDS THE DIRECTION FROM WHICH THE WIND IS BLOWING (if the wind is generated northwest of the monitored site, then upwind would be northwest of the site); downwind similarly identifies a position relative to the source of emissions TOWARDS THE DIRECTION TO WHICH THE WIND IS BLOWING (the wind will travel from the site to the downwind location).

The five-hour requirement was chosen by scientific investigation. It represents a period of steady wind direction that may be expected during any season of the year. Wind is driven by variations in surface temperature and pressure. These can be affected by variations in season as well as by the passage of synoptic-scale storms. Surface heating is less during winter, providing a shorter period during which stable winds might be observed. Surface heating fluctuates daily as well as seasonally, providing regular changes to the local wind field. In general, winds at night are light and variable, when surface heating is minimal. Daytime winds are stronger, and more stable in direction. Therefore, the most stable winds are produced in the period covering late morning to early evening at any time of year. Five hours reflects the mean period, irrespective of season, over which directionally stable winds occur. This period also corresponds to the normal period of operations at commercial/industrial facilities and will therefore both maximize the potential for emissions and define the emission potential of the suspected source.

### 2.3 PUBLIC HEALTH AND SAFETY REQUIREMENTS

Polychlorinated biphenyls (PCBs) (C.A.S. 1336-36-3) are a family of man-made chemicals that contain 209 individual compounds with varying levels of toxicity. The seven classes of PCBs described here include 35 percent of all PCBs and 98 percent of PCBs sold in the U.S. since 1970, most of which are known in the U.S. by their industrial trade name, Aroclor.

Because of their insulating and nonflammable properties, PCBs have been widely used as coolants and lubricants in transformers, capacitors, and other electrical equipment.

The manufacture and use of PCBs in new products stopped in the U.S. in October 1977, because of evidence that PCBs accumulated in the environment and could cause human health hazards. Although PCBs are no longer manufactured, exposure still occurs. Many older transformers and capacitors, which have lifetimes of 30 years or more, still contain fluids made with PCBs. Old fluorescent lighting fixtures may contain PCBs as well.

Another major source of PCB exposure is from contaminated indoor air in buildings that contain devices made with PCBs.

### 2.3.1 Health Effects

PCBs are classified by EPA as carcinogens, particularly with regard to the liver. Reproductive and developmental effects may also be related to occupational exposure to PCBs and eating contaminated fish. Studies indicate that PCBs concentrate in human breast milk. PCBs can be passed easily into the bloodstream from a pregnant woman to a fetus, and from a breastfeeding mother to a nursing infant. Slight effects on birth weight, head circumference, gestational age and/or neonatal behavior have been reported in infants of mothers who were consumers of PCB-contaminated fish.

Exposure to PCBs can also be by inhalation or skin contact. Studies show that irritations such as lesions, rashes, and burning eyes and skin can occur in PCB-exposed workers.

Populations at high risk of exposure to PCBs include nursing infants whose mothers consume large amounts of contaminated fish; embryos, fetuses, and neonates; and people who work or live in buildings that have high concentrations of PCBs in the indoor air supply.

### 2.3.2 Exposure Values

IDLH: 5 mg/m<sup>3</sup> Not applicable for Chlordipheyl (54% chlorine), a potential human carcinogen. (NIOSH, 1997)

TLV TWA: 0.5 mg/m<sup>3</sup> For chlorodiphenyl (54% Chlorine). Skin. (ACGIH, 1999)

TLV STEL: 1 mg/m<sup>3</sup> For Chlorodiphenyl (54% Chlorine). Skin (ACGIH, 1999)

NIOSH REL: Ca TWA 0.001 mg/m<sup>3</sup>

OSHA PEL: TWA 1 mg/m<sup>3</sup>.

### 2.3.3 Economics

PCBs are no longer produced or used in the production of new products in the United States. Disposal of PCB materials that are still in service is controlled by federal regulations.

Annual U.S. production of PCBs peaked in 1970 when 85 million pounds were produced. Monsanto, the sole U.S. manufacturer at the time production was banned, had been producing Aroclors 1016, 1221, 1242, and 1254 at a facility in Sauget, Illinois.

#### 2.3.4 Regulation

The Food and Drug Administration (FDA) has issued permissible levels of PCBs in food and packaging. PCBs are regulated by the U.S. Environmental Protection Agency under the Clean Water Act Effluent Guidelines.

Under Section 313 of the Emergency Planning and Community Right to Know Act of 1986, releases of more than one pound of polychlorinated biphenyls into the air, water, and land must be reported annually and entered into the Toxic Release Inventory (TRI).

### 3.0 PROCEDURES

#### 3.1 SITE EXCAVATION

As stated by the contractor, approximately 90 - 120 working days (3 to 4 months) will be required to complete the project. Monitoring will be conducted during the operation, to be implemented in accordance with the following Rule conditions:

- Preparation and implementation of a Fugitive Dust Plan.
- Monitoring of wind speed and direction and particulate matter (PM<sub>10</sub>).
- Monitoring of PCB levels.

Mobilization for the excavation has been scheduled to commence on 5 July 2006 . It is assumed that the planned work day is scheduled from 07:00 AM through 05:00 PM, with one hour for lunch each day. Monitoring will be conducted during working hours.

#### 3.2 WIND MONITORING

A MetOne Instruments, Inc. wind sensor, Model # G034A, will be installed in the vicinity of the property. The sensor will be battery-operated, with a solar panel for sustainability, and will continuously record wind speed and direction during the excavation. The monitor will be installed in accordance with the siting criteria outlined in 40 CFR Part 50, and will be aligned to true north. Analog data will be transmitted from the wind speed and direction sensors to a data logger. Data will be downloaded for analysis at the end of each week, as well as at the conclusion of each particulate monitoring episode.

#### 3.3 PARTICULATE MONITORING

Monitoring for concentrations of PM<sub>10</sub> upwind and downwind of the work site will be conducted continuously, to record compliance with the emission limits imposed by the RAW and by SCAQMD Rule 403. Monitoring for particulates will be conducted in accordance with the protocol established under SCAQMD Rule 403 – Fugitive Dust, modified to include real-time particulate monitors. Namely:

A person shall not cause or allow PM<sub>10</sub> levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between

upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM<sub>10</sub> monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM<sub>10</sub>.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

Fugitive dust testing will be conducted employing upwind and downwind Thermo Andersen DataRam Aerosol Monitors, Model 4000. Sampling at each location will be conducted simultaneously over at least a five-hour monitoring period. The monitoring period will be chosen such that the wind speed is measurable and the wind direction is steady. The monitors shall be placed such that the vector from the upwind to the downwind location corresponds with the prevailing wind direction ( $\pm 15^\circ$ ). A monitoring event will be considered valid if the following conditions are met:

- Each monitor is operated for five hours (300 minutes).
- The starting and stopping times of the upwind and downwind samplers shall be the same,  $\pm 10$  minutes.
- Each monitor will operate at its calibrated rate of between 1.7 and 2.3 liters per minute,  $\pm 10\%$ , throughout the five-hour monitoring interval.
- The direction of the wind will remain constant throughout the sampling period,  $\pm 15\%$ , such that the upwind/downwind relationship is maintained.

Known performance characteristics of the monitors are critical to the successful collection of valid particulate data. Monitors will be calibrated in accordance with manufacturer's specifications, adhering to the guidelines promulgated in 40 CFR, Part 50, Appendix J. A multi-point calibration will be conducted on each sampler prior to placement in the field. Single-point calibrations of each sampler will be conducted in the field prior to each monitoring event. Deviations of more than 10% from the formal calibration curve will require a full multi-point calibration prior to operation. The flow-rate recorder will be monitored during each run, and deviations of more than 10% from the calibrated flow rate will invalidate the run.

Quality Assurance will be maintained throughout the period of the contract. Sampler calibration records will be maintained, to determine the overall accuracy and efficiency of the samplers. Maintenance records will be kept on each sampler, in accordance with the guidelines set forth in Sections 2.2 and 2.10 of EPA/600/R-94/038b, *Quality Assurance Handbook for Air Pollution Measurement Systems*.

Fugitive dust sampling will take place daily. Andersen DataRam monitors will be placed upwind and at up to three downwind locations prior to the commencement of soil removal. Data collected from these monitors will be recorded at 30-minute intervals. A simple averaging technique will provide hourly concentrations, which will be combined to provide the 5-hour concentration. An action level of  $7 \mu\text{g dust}/\text{m}^3$  will be established, measured as the difference between upwind and downwind monitors over a one-hour monitoring period. This action level has been selected to incorporate the fence line action level of fugitive dust containing PCBs. If exceedances of the  $7 \mu\text{g dust}/\text{m}^3$  concentration limit are encountered indicating potentially elevated levels of PCBs, additional watering or other appropriate control measures will be implemented to reduce the level of dust generated.

Samplers will be started and stopped within  $\pm 10$  minutes of each other. Samplers will be operated for a total of 5 hours in an upwind/downwind configuration. Wind Speed and Direction data will be collected for the period in which the samplers are operated, to complete the vector analysis. The following limitations apply to particulate monitoring:

- Monitoring will not be conducted on days when the sustained (15-minute average) wind speed exceeds 15 miles per hour (mph), or if gusts exceed 25 mph. Monitoring initiated before these limits are reached will be curtailed and the samples annotated as void due to excessive winds.
- Monitoring will not be conducted during periods of rain. If, once monitoring has been initiated, measurable rainfall occurs ( $>0.1''$ ), the monitoring on that day will be cancelled and the samples annotated as void due to precipitation.

Monitoring will not be scheduled within 72 hours of measurable precipitation

### 3.4. PCB MONITORING

Section 25323 of the California Health and Safety Code requires that personal monitoring for airborne concentrations of toxic air contaminants be conducted at regular intervals during the excavation. Real-time monitors for PCBs are not available. Therefore, levels of PCBs will be monitored in accordance with procedures outlined in NIOSH Method 5503. Gilian Gilair5 samplers will be employed, fitted with sample cassettes developed with a combination of glass fiber filter and solid sorbent (XAD-2 resin and polyurethane foam). Samples will be collected downwind of the daily excavation site each day, over an 8-hour sampling interval, in order to compare action levels with established permissible exposure limits. The NIOSH threshold limit for PCBs is 0.001 milligrams per cubic meter ( $\text{mg}/\text{m}^3$ ), measured over an 8-hour monitoring period. The action level established for this project is  $0.00007 \text{ mg PCB}/\text{m}^3$ . Samples will be analyzed using EPA Method 8082, modified for PCBs. Monitoring will be conducted daily during the first two weeks of the excavation. If the action level is not exceeded, PCB monitoring will be reduced to twice weekly. However, if during this period the action level is exceeded, daily monitoring will resume. The following table identifies the maximum soil

concentrations of the COPCs found at the site, as well as their established Community Action Levels.

Chemical	Max Soil Conc. (mg/kg)	CAL/OSHA PEL (mg/m <sup>3</sup> )	Community Action Level (mg COPC/m <sup>3</sup> )	Total COPCs in air (mg/m <sup>3</sup> ) based on Community Action Level of dust at 0.05, 1 and 5 mg/m <sup>3</sup>		
Total Dust	-	10		0.05	1	5
PCB	9560		7E-05	4.78E-04	9.56E-03	0.0478
TCDD	3.85E-04		7E-09	1.925E-11	3.85E-10	1.925E-09

### 3.5 DIOXIN/FURAN MONITORING

Monitoring for dioxins and furans requires high-volume samplers fitted with polyurethane foam (PUF) sleeves. Samples are collected in both this media and on a quartz filter over an 8-hour sampling interval. The samples are then analyzed by EPA Method TO-9A. Monitoring for these COPCs may be required, depending upon the results of co-located soils samples, to be collected by Frey Environmental, Inc.

### 4.0 QUALITY ASSURANCE

To ensure that the data collected is as true and accurate as possible, and that the protocol and results of this project are traceable under standard scientific protocol, quality assurance procedures will be applied to each element of field monitoring. These procedures include:

- Complete calibration records on each sampler. Daily flow checks will be included in each equipment log, for comparison. Multi-point flow calibrations will be conducted if any daily flow check is not within  $\pm 10\%$  of the calibrated value. If additional multi-point flow calibrations are required, records of these calibrations will be maintained in the log.
- In order to ensure that procedures are followed uniformly throughout the project, each staff member involved in this project will read this Work Plan and sign the following acknowledgement that the Plan has been read and understood.

**Work Plan for Air Monitoring As Required To Comply with the Response Plan  
and South Coast Air Quality Management District Rule 403- Fugitive Dust  
Agricultural Park  
7020 Crest Avenue, Riverside, California**

Staff involved in conducting monitoring the excavation of the abandoned agricultural facility in Riverside, California have read and understand the required monitoring procedures listed in this Plan.

Date	Company	Name	Signature



**APPENDIX B**  
**SOIL SAMPLING RESULTS MEMORANDUM**



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July 26, 2016

Ms. Maryam Tasnif-Abassi  
Department of Toxic Substances Control  
5796 Corporate Avenue  
Cypress, California 90630

SITE: FORMER AGRICULTURAL PARK  
7020 CREST AVENUE  
RIVERSIDE, CALIFORNIA

RE: SOIL SAMPLING RESULTS

Dear Ms. Tasnif-Abassi:

This deliverable is provided to update the DTSC with soil sample results for the former Riverside Agricultural Park located at 7020 Crest Avenue in Riverside, California. Work activities began on March 22, 2016 following work plan approval by the DTSC and EPA.

The following documents are provided:

- Data summary tables for the Cut Lots, Fill Lots, and Outside Areas; and
- A figure of soil sample locations.

If you have any comments, please contact David Lennon at (949) 341-7458.

Sincerely,

David Lennon  
Principal Consultant

Ross Surrency, PG  
Senior Project Geologist

Enclosure

cc: Greg Neal, DTSC (electronic copy)

Table 1  
PCB Confirmation Sample Results  
Cut Lots  
Former Agricultural Park, Riverside, California

Cut Lot Samples				Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest					
Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action
C1635-N25	0.5	3/22/2016	0.31	Excavate to 50 ft. point																				
C1635-N50	0.5	3/22/2016	0.035	NFA																				
C1635-E25	0.5	3/22/2016	0.023J	NFA																				
C1635-E50	0.5	3/22/2016	ND	NFA																				
C1635-S25	0.5	3/22/2016	0.11	NFA																				
C1635-S50	0.5	3/22/2016	0.11	NFA																				
C1635-W25	0.5	3/22/2016	0.16	NFA																				
C1635-W50	0.5	3/22/2016	0.33	Excavate																				
C1636-N25	0.5	3/22/2016	0.27	Excavate to 50 ft. point																				
C1636-N50	0.5	3/22/2016	0.22	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2088 at same location																			
C1636-E25	0.5	3/22/2016	0.12	NFA																				
C1636-E50	0.5	3/22/2016	0.16	NFA																				
C1636-S25	0.5	3/22/2016	0.087	NFA																				
C1636-S50	0.5	3/22/2016	0.11	NFA																				
C1636-W25	0.5	3/22/2016	0.20	NFA																				
C1636-W50	0.5	3/22/2016	0.22	Excavate																				
C1637-N25	0.5	3/22/2016	0.24	Excavate to 50 ft. point																				
C1637-N50	0.5	3/22/2016	0.17	NFA																				
C1637-E25	0.5	3/22/2016	0.27	Excavate to 50 ft. point																				
C1637-E50	0.5	3/22/2016	0.23	Excavate																				
C1637-S25	0.5	3/22/2016	0.099	NFA																				
C1637-S50	0.5	3/22/2016	0.085	NFA																				
C1637-W25	0.5	3/22/2016	0.22	Excavate to 50 ft. point																				
C1637-W50	0.5	3/22/2016	0.30	Excavate																				
C1638-N25	0.5	3/22/2016	0.21	NFA																				
C1638-N50	0.5	3/22/2016	0.16	NFA																				
C1638-E25	0.5	3/22/2016	0.30	Excavate to 50 ft. point																				
C1638-E50	0.5	3/22/2016	0.41	Excavate																				
C1638-S25	0.5	3/22/2016	0.036	NFA																				
C1638-S50	0.5	3/22/2016	0.12	NFA																				
C1638-W25	0.5	3/22/2016	0.33	Excavate to 50 ft. point																				
C1638-W50	0.5	3/22/2016	0.31	Excavate																				
C1639-N25	0.5	3/23/2016	0.44	Excavate to 50 ft. point																				
C1639-N50	0.5	3/23/2016	0.0099J	NFA																				
C1639-E25	0.5	3/23/2016	0.29	Excavate to 50 ft. point																				
C1639-E50	0.5	3/23/2016	0.41	Excavate																				
C1639-S25	0.5	3/23/2016	0.08	NFA																				
C1639-S50	0.5	3/23/2016	0.011J	NFA																				
C1639-W25	0.5	3/23/2016	0.41	Excavate to 50 ft. point																				
C1639-W50	0.5	3/23/2016	0.40	Excavate																				
C1003-N25	0.5	3/23/2016	0.17	NFA																				
C1003-N50	0.5	3/23/2016	0.15	NFA																				
C1003-E25	0.5	3/23/2016	0.30	Excavate to 50 ft. point																				
C1003-E50	0.5	3/23/2016	0.58	Excavate																				
C1003-S25	0.5	3/23/2016	0.12	NFA																				
C1003-S50	0.5	3/23/2016	0.028J	NFA																				
C1003-W25	0.5	3/23/2016	0.43	Excavate to 50 ft. point																				
C1003-W50	0.5	3/23/2016	0.63	Excavate																				
C1640-N25	0.5	3/23/2016	0.10	NFA																				
C1640-N50	0.5	3/23/2016	0.17	NFA																				
C1640-E25	0.5	3/23/2016	0.32	Excavate to 50 ft. point																				
C1640-E50	0.5	3/23/2016	0.26	Excavate																				
C1640-S25	0.5	3/23/2016	0.13	NFA																				
C1640-S50	0.5	3/23/2016	0.10	NFA																				
C1640-W25	0.5	3/23/2016	0.28	Excavate to 50 ft. point																				
C1640-W50	0.5	3/23/2016	0.071	NFA																				
C1660-N25	0.5	3/23/2016	ND	NFA																				
C1660-N50	0.5	3/23/2																						

Table 1  
PCB Confirmation Sample Results  
Cut Lots  
Former Agricultural Park, Riverside, California

Cut Lot Samples					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest				
Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action
C1716-S50	0.5	3/24/2016	ND	NFA																				
C1716-W25	0.5	3/24/2016	0.073	NFA																				
C1716-W50	0.5	3/24/2016	ND	NFA																				
C1714-N25	0.5	3/24/2016	0.015J	NFA																				
C1714-N50	0.5	3/24/2016	0.025J	NFA																				
C1714-E25	0.5	3/24/2016	ND	NFA																				
C1714-E50	0.5	3/24/2016	ND	NFA																				
C1714-S25	0.5	3/24/2016	ND	NFA																				
C1714-S50	0.5	3/24/2016	0.11	NFA																				
C1714-W25	0.5	3/24/2016	0.18	NFA																				
C1714-W45	0.5	3/24/2016	0.068	NFA																				
C1713-N25	0.5	3/24/2016	0.10	NFA																				
C1713-N50	0.5	3/24/2016	0.15	NFA																				
C1713-E25	0.5	3/24/2016	0.012J	NFA																				
C1713-E50	0.5	3/24/2016	0.068	NFA																				
C1713-S25	0.5	3/24/2016	0.099	NFA																				
C1713-S50	0.5	3/24/2016	0.086	NFA																				
C1713-W25	0.5	3/24/2016	0.067	NFA																				
C1713-W50	0.5	3/24/2016	0.12	NFA																				
C1709-N25	0.5	3/24/2016	ND	NFA																				
C1709-N50	0.5	3/24/2016	0.014J	NFA																				
C1709-E25	0.5	3/24/2016	0.27	Excavate to 50 ft. point																				
C1709-E50	0.5	3/24/2016	ND	NFA																				
C1709-S25	0.5	3/25/2016	1.0	Excavate to 50 ft. point																				
C1709-S50	0.5	3/25/2016	0.62	Step out 10 ft. and retest	C1709-S60	0.5	4/11/2016	0.43	Step out 10 ft. and retest	C1709-S70	0.5	4/25/2016	0.38	Step out 10 ft. and retest	C1709-S80	0.5	5/3/2016	0.40	Step out 10 ft. and retest	C1709-S90	0.5	5/12/2016	0.37	No step-out sample collected due to presence of sample C1694 in same vicinity.
C1709-W25	0.5	3/25/2016	0.95	Excavate to 50 ft. point	C1709-W60	0.5	4/11/2016	0.1195J	NFA															
C1709-W50	0.5	3/25/2016	0.57	Step out 10 ft. and retest																				

Notes: NFA = No further action. Result is <0.22 mg/kg.  
mg/kg = milligrams per kilogram  
ftg = feet below grade

Table 2  
PCB Confirmation Sample Results  
Fill Lots  
Former Agricultural Park, Riverside, California

Fill Lot Samples				Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest					
Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action
F1612-N60	0.5	3/25/2016	0.083	NFA																				
F1612-E60	0.5	3/25/2016	0.052	NFA																				
F1612-S60	0.5	3/25/2016	0.078	NFA																				
F1613-N60	0.5	3/25/2016	0.041	NFA																				
F1613-S60	0.5	3/25/2016	0.37	Step out 10 ft. and retest	F1613-S70	0.5	4/12/2016	0.509	Step out 10 ft. and retest	F1613-S80	0.5	4/27/2016	0.43	Step out 10 ft. and retest	Unable to step out any further due to south fenceline.									
F1614-S60	0.5	3/25/2016	0.23	Step out 10 ft. and retest	F1614-S70	0.5	4/12/2016	1.54	Step out 10 ft. and retest	F1614-S80	0.5	4/27/2016	0.65	Step out 10 ft. and retest	Unable to step out any further due to south fenceline.									
F1614-N60	0.5	3/25/2016	0.15	NFA																				
F1614-W60	0.5	3/25/2016	0.13	NFA																				
F1616-E60	0.5	3/25/2016	0.22	Step out 10 ft. and retest	F1616-E70	0.5	4/12/2016	0.065	NFA															
F1616-S60	0.5	3/25/2016	0.063	NFA																				
F1616-W60	0.5	3/25/2016	0.041	NFA																				
F1627-S60	0.5	3/25/2016	0.098	NFA																				
F1627-E60	0.5	3/25/2016	0.0080J	NFA																				
F1625-S60	0.5	3/25/2016	0.14	NFA																				
F1619-E60	0.5	3/25/2016	0.080	NFA																				
F1619-W60	0.5	3/25/2016	0.010J	NFA																				
F1619-S60	0.5	3/25/2016	0.027J	NFA																				
F1623-S60	0.5	3/25/2016	0.20	NFA																				
F1623-W60	0.5	3/25/2016	0.89	Step out 10 ft. and retest	F1623-W70	0.5	4/11/2016	0.62	Step out 10 ft. and retest	F1623-W80	0.5	4/27/2016	0.55	Step out 10 ft. and retest	F1623-W90	0.5	5/10/2016	0.30	Step out 10 ft. and retest	F1623-W100	0.5	5/20/2016	0.19	NFA
F1623-N60	0.5	3/25/2016	0.46	Step out 10 ft. and retest	F1623-N70	0.5	4/11/2016	0.296	Step out 10 ft. and retest	F1623-N78	0.5	4/27/2016	0.25	Step out 10 ft. and retest	F1623-N90	0.5	5/10/2016	0.38	Step out 10 ft. and retest	F1623-N100	0.5	5/20/2016	0.070	NFA
F1624-N52	0.5	3/28/2016	0.212	NFA																				
F1625-N60	0.5	3/28/2016	0.301	Step out 10 ft. and retest	F1625-N70	0.5	4/11/2016	0.143J	NFA															
F1641-W60	0.5	3/28/2016	0.47	Step out 10 ft. and retest	F1641-W70	0.5	4/11/2016	0.31	Step out 10 ft. and retest	F1641-W80	0.5	4/27/2016	0.43	Step out 10 ft. and retest	F1641-W90	0.5	5/10/2016	0.47	Step out 10 ft. and retest	F1641-W100	0.5	5/20/2016	0.20	NFA
F1641-N60	0.5	3/28/2016	0.42	Step out 10 ft. and retest	F1641-N70	0.5	4/11/2016	0.186J	NFA															
F1004-N60	0.5	3/28/2016	0.091	NFA																				
F1004-E60	0.5	3/28/2016	0.53	Step out 10 ft. and retest																				
F1647-E60	0.5	3/28/2016	0.043	NFA																				
F1647-S60	0.5	3/28/2016	0.104	NFA																				
F1646-S60	0.5	3/28/2016	0.253	Step out 10 ft. and retest	F1646-S70	0.5	4/11/2016	0.877	Step out 10 ft. and retest	F1646-S80	0.5	4/27/2016	0.43	Step out 10 ft. and retest	F1646-S90	0.5	5/10/2016	0.35	Step out 10 ft. and retest	F1646-S100	0.5	5/20/2016	0.17	NFA
F1646-W60	0.5	3/28/2016	0.132J	NFA																				
F1667-W60	0.5	3/28/2016	0.692	Step out 10 ft. and retest	F1667-W70	0.5	4/11/2016	0.208J	NFA															
F1669-W60	0.5	3/28/2016	0.071	NFA																				
F1690-W60	0.5	3/28/2016		Step out 10 ft. and retest	F1690-W70	0.5	4/11/2016	0.52	Step out 10 ft. and retest	F1690-W80	0.5	4/27/2016	0.32	Step out 10 ft. and retest	No step-out sample collected due to presence of sample Q2289 in same vicinity									
F1670-N60	0.5	3/28/2016	0.145J	NFA																				
F1690-N60	0.5	3/28/2016	0.487	Step out 10 ft. and retest	F1690-N70	0.5	4/11/2016	0.024J	NFA															
F1690-E60	0.5	3/28/2016	0.239	Step out 10 ft. and retest	F1690-E70	0.5	4/11/2016	0.233	Step out 10 ft. and retest	F1690-E80	0.5	4/27/2016	0.24	Step out 10 ft. and retest	F1690-E90	0.5	5/10/2016	0.66	Step out 10 ft. and retest	F1690-E100	0.5	5/20/2016	0.12	NFA
F1670-E60	0.5	3/28/2016	1.38	Step out 10 ft. and retest	F1670-E70	0.5	4/11/2016	1.1	Step out 10 ft. and retest	F1670-E80	0.5	4/27/2016	0.19	NFA										
F1665-N60	0.5	3/28/2016	2.61	Step out 10 ft. and retest	F1665-N70	0.5	4/11/2016	0.26	Step out 10 ft. and retest	F1665-N80	0.5	4/27/2016	0.48	Step out 10 ft. and retest	F1665-N90	0.5	5/10/2016	0.042	NFA					
F1665-E60	0.5	3/28/2016	ND	NFA																				
F1665-S60	0.5	3/28/2016	0.036	NFA																				
F1651-S60	0.5	3/28/2016	2.0	Step out 10 ft. and retest																				
F1651-W60	0.5	3/28/2016	0.16	NFA																				
F1651-E60	0.5	3/28/2016	0.52	Step out 10 ft. and retest	F1651-E70	0.5	4/12/2016	0.071	NFA															
F1662-W60	0.5	3/28/2016	0.025J	NFA																				
F1662-E60	0.5	3/28/2016	0.50	Step out 10 ft. and retest	F1662-E70	0.5	4/12/2016	0.343	Step out 10 ft. and retest	F1662-E80	0.5	4/27/2016	1.0	Step out 10 ft. and retest	F1662-E90	0.5	5/10/2016	0.43	Step out 10 ft. and retest	F1662-E100	0.5	5/20/2016	0.26	No step-out sample collected due to presence of sample F1661 in same vicinity
F1662-N60	0.5	3/28/2016	0.48	Step out 10 ft. and retest																				
F1654-S60	0.5	3/28/2016	0.038	NFA																				
F1654-E60	0.5	3/28/2016	0.92	Step out 10 ft. and retest																				
F1654-N60	0.5	3/28/2016	0.038	NFA																				
F1653-N60	0.5	3/28/2016	0.056	NFA																				
F1653-W60	0.5	3/28/2016	0.43	Step out 10 ft. and retest	F1653-W70	0.5	4/12/2016	0.965	Step out 10 ft. and retest	F1653-W80	0.5	4/27/2016	0.21	NFA										
F1653-S60	0.5	3/28/2016	0.11	NFA																				
F1693-E60	0.5	3/29/2016	0.232	Step out 10 ft. and retest	F1693-E70	0.5	4/11/2016	0.093	NFA															
F1693-N60	0.5	3/29/2016	0.185J	NFA																				
F1692-N60	0.5	3/29/2016	0.257	Step out 10 ft. and retest	F1692-N70	0.5	4/11/2016	0.054	NFA															
F1692-W60	0.5	3/29/2016	0.294	Step out 10 ft. and retest	F1692-W70	0.5	4/11/2016	0.60	Step out 10 ft. and retest	F1692-W80	0.5	4/27/2016	0.055	NFA										
F1688-E60	0.5	3/29/2016	0.72	Step out 10 ft. and retest	F1688-E70	0.5	4/11/2016	0.36	Step out 10 ft. and retest	No step-out sample collected due to presence of sample C1687-W60 at same location														
F1688-S60	0.5	3/29/2016	0.78	Step out 10 ft. and retest	F1688-S70	0.5	4/11/2016	0.019J	NFA															
F1688-W60	0.5	3/29/2016	0.079	NFA																				
F1730-N60	0.5	3/29/2016	6.7	Step out 10 ft. and retest	F1730-N70	0.5	4/11/2016	0.187J	NFA															
F1730-E60	0.5	3/29/2016	0.984	Step out 10 ft. and retest	F1730-E70	0.5	4/11/2016	0.213J	NFA															
F1730-W60	0.5	3/29/2016	0.288	Step out 10 ft. and retest	F1730-W70																			

Notes: NFA = No further action. Result is <0.22 mg/kg.  
mg/kg = milligrams per kilogram  
ftg = feet below grade

Table 3  
PCB Confirmation Sample Results  
Outside Areas  
Former Agricultural Park, Riverside, California

Outside Area Samples					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest				
Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action
O1601-S25	0.5	3/29/2016	0.53	Step out 10 ft. and retest	O1601-S35	0.5	4/12/2016	0.162	NFA																				
O1601-E25	0.5	3/29/2016	0.047	NFA																									
O1601-N25	0.5	3/29/2016	0.88	Step out 10 ft. and retest	O1601-N35	0.5	4/12/2016	0.817	Step out 10 ft. and retest	O1601-N45	0.5	4/27/2016	0.15	NFA															
O1601-W25	0.5	3/29/2016	0.28	Step out 10 ft. and retest	O1601-W35	0.5	4/12/2016	0.334	Step out 10 ft. and retest	O1601-W45	0.5	4/27/2016	4.3	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2070 in same vicinity.														
O1607-W25	0.5	3/29/2016	ND	NFA																									
O1607-S25	0.5	3/29/2016	0.40	Step out 10 ft. and retest	O1607-S35	0.5	4/12/2016	0.533	Step out 10 ft. and retest	O1607-S45	0.5	4/27/2016	0.95	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2061 in same vicinity.														
O1607-N25	0.5	3/29/2016	0.15	NFA																									
O1607-E25	0.5	3/29/2016	0.11	NFA																									
O1606-S25	0.5	3/29/2016	0.12	NFA																									
O1606-W25	0.5	3/29/2016	0.086	NFA																									
O1606-E25	0.5	3/29/2016	0.053	NFA																									
O1606-N25	0.5	3/29/2016	0.12	NFA																									
O1609-S25	0.5	3/29/2016	0.32	Step out 10 ft. and retest	O1609-S35	0.5	4/12/2016	0.1807	NFA																				
O1609-E25	0.5	3/29/2016	0.19	NFA																									
O1609-W25	0.5	3/29/2016	ND	NFA																									
O1609-N25	0.5	3/29/2016	0.17	NFA																									
O1602-N25	0.5	3/29/2016	0.20	NFA																									
O1602-W25	0.5	3/29/2016	0.20	NFA																									
O1602-S25	0.5	3/29/2016	0.13	NFA																									
O1602-E25	0.5	3/29/2016	0.037	NFA																									
O1610-S25	0.5	3/29/2016	0.162	NFA																									
O1610-N25	0.5	3/29/2016	0.212	NFA																									
O1610-W25	0.5	3/29/2016	0.153	NFA																									
O1610-E25	0.5	3/29/2016	0.15	NFA																									
O2008	0.5	3/30/2016	0.034	NFA																									
O2009	0.5	3/30/2016	0.27	Step out 25 ft. in 4 directions and retest	O2009-E25	0.5	4/13/2016	0.13	NFA																				
					O2009-W25	0.5	4/13/2016	0.17	NFA																				
					Could not step out south due to fence.																								
					Could not step out north due to a rock pile.																								
O2010	0.5	3/30/2016	0.15	NFA																									
O2012	--	--	--	Not sampled due to rock pile.																									
O2013	0.5	3/30/2016	0.11	NFA																									
O2011	0.5	3/30/2016	0.11	NFA																									
O2014	0.5	3/30/2016	0.14	NFA																									
O2016	0.5	3/30/2016	0.061	NFA																									
O2017	0.5	3/30/2016	0.11	NFA																									
O1604-S25	0.5	3/30/2016	0.14	NFA																									
O1604-W25	0.5	3/30/2016	0.090	NFA																									
O1604-E25	0.5	3/30/2016	0.026	NFA																									
O1604-N25	0.5	3/30/2016	0.15	NFA																									
O2085	0.5	3/30/2016	0.12	NFA																									
O2084	0.5	3/30/2016	0.72	Step out 25 ft. in 4 directions and retest	O2084-N25	0.5	4/13/2016	0.060	NFA																				
					O2084-E25	0.5	4/13/2016	0.38	Step out 10 ft. and retest	O2084-E35	0.5	4/27/2016	0.16	NFA															
					O2084-S25	0.5	4/13/2016	0.25	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O1602-N25 at same location.																			
					O2084-W25	0.5	4/13/2016	0.13	NFA																				
O2080	0.5	3/30/2016	0.24	Step out 25 ft. in 4 directions and retest	O2080-N25	0.5	4/13/2016	0.31	Step out 10 ft. and retest	O2080-N35	0.5	4/27/2016	0.26	Step out 10 ft. and retest	O2080-N45	0.5	5/11/2016	0.057	NFA										
					O2080-E25	0.5	4/13/2016	0.17	NFA																				
					O2080-S25	0.5	4/13/2016	0.57	Step out 10 ft. and retest	O2080-S35	0.5	4/27/2016	0.013	NFA															
					O2080-W25	0.5	4/13/2016	0.045	NFA																				
O207																													

**Table 3**  
**PCB Confirmation Sample Results**  
**Outside Areas**  
**Former Agricultural Park, Riverside, California**

Outside Area Samples					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest				
Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action
O2025	0.5	3/30/2016	0.22	Step out 25 ft. in 4 directions and retest	No north step-out sample collected due to presence of sample O1636-S50 at same location.					O2025-S35	0.5	4/28/2016	0.065	NFA															
					O2025-S25	0.5	4/14/2016	0.40	Step out 10 ft. and retest																				
					O2025-E25	0.5	4/14/2016	0.15	NFA																				
					O2025-W25	0.5	4/14/2016	0.23	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2031-E25 in same vicinity.																			
					O2025-N25	0.5	4/14/2016	0.18	NFA																				
O2024	0.5	3/30/2016	0.11	NFA																									
O2026	0.5	3/30/2016	0.082	NFA																									
O2023	0.5	3/31/2016	0.023	NFA																									
O2006	0.5	3/31/2016	0.14	NFA																									
O2007	0.5	3/31/2016	0.17	NFA																									
O2005	0.5	3/31/2016	0.24	Step out 25 ft. to north and south and retest	O2005-S25	0.5	4/14/2016	0.16	NFA																				
					O2005-N25	0.5	4/14/2016	0.33	Step out 10 ft. and retest	O2005-N35	0.5	4/28/2016	0.60	Step out 10 ft. and retest	O2005-N45	0.5	5/11/2016	0.57	Step out 10 ft. and retest	O2005-N55	0.5	5/20/2016	0.24	Step out 10 ft. and retest	No step-out sample collected due to presence of sample F1654-S60 in same vicinity.				
O2004	0.5	3/31/2016	0.31	Step out 25 ft. to north and south and retest	O2004-S25	0.5	4/14/2016	0.079	NFA																				
					O2004-N25	0.5	4/14/2016	0.24	Step out 10 ft. and retest	O2004-N35	0.5	4/28/2016	0.90	Step out 10 ft. and retest	O2004-N45	0.5	5/11/2016	0.39	Step out 10 ft. and retest	No step-out sample collected due to presence of concrete.									
O2003	0.5	3/31/2016	0.50	Step out 25 ft. to north and south and retest	O2003-S25	0.5	4/14/2016	0.11	NFA																				
					O2003-N25	0.5	4/14/2016	0.33	Step out 10 ft. and retest	O2003-N35	0.5	4/28/2016	0.20	NFA															
O2002	0.5	3/31/2016	0.58	Step out 25 ft. to north and south and retest	O2002-S25	0.5	4/14/2016	0.20	NFA																				
					O2002-N25	0.5	4/14/2016	0.33	Step out 10 ft. and retest	O2002-N35	0.5	4/28/2016	0.13	NFA															
O2000	0.5	3/31/2016	0.27	Step out 25 ft. to north and south and retest	O2000-S25	0.5	4/14/2016	0.403	Step out 10 ft. and retest	O2000-N35	0.5	4/28/2016	0.20	NFA															
					O2000-S25	0.5	4/14/2016	0.37	Step out 10 ft. and retest	O2000-S35	0.5	4/28/2016	0.4	Step out 10 ft. and retest	O2000-S45	0.5	5/11/2016	1.0	Step out 10 ft. and retest	No step-out sample collected. Is within an area of planned excavation.									
O2087	0.5	3/31/2016	0.25	Step out 25 ft. in 4 directions and retest	O2087-W25	0.5	4/14/2016	0.43	Step out 10 ft. and retest	O2087-W35	0.5	4/28/2016	0.25	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2088 in same vicinity.														
					O2087-E25	0.5	4/14/2016	0.098	NFA																				
					O2087-N25	0.5	4/14/2016	ND	NFA																				
					O2087-S25	0.5	4/14/2016	0.23	Step out 10 ft. and retest	O2087-S35	0.5	4/28/2016	0.023	NFA															
O2086	0.5	3/31/2016	0.064	NFA																									
O2088	0.5	3/31/2016	0.18	NFA																									
O2089	0.5	3/31/2016	0.16	NFA																									
O2123	0.5	3/31/2016	ND	NFA																									
O2124	0.5	3/31/2016	ND	NFA																									
O2120	0.5	3/31/2016	0.073	NFA																									
O2125	0.5	3/31/2016	0.081	NFA																									
O2128	0.5	3/31/2016	0.14	NFA																									
O2177	0.5	3/31/2016	ND	NFA																									
O2126	0.5	3/31/2016	0.15	NFA																									
O1633-S25	0.5	3/31/2016	0.48	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2046-N25 at same location.																								
O1633-E25	0.5	3/31/2016	0.19	NFA																									
O1633-W25	0.5	3/31/2016	0.14	NFA																									
O1633-N25	0.5	3/31/2016	0.44	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2031-S25 at same location.																								
O2097	0.5	3/31/2016	0.60	Step out 25 ft. in 4 directions and retest	O2097-E25	0.5	4/15/2016	0.47	Step out 10 ft. and retest	O2097-E35	0.5	4/28/2016	0.25	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2127 in same vicinity.														
					O2097-N25	0.5	4/15/2016	1.7	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2096-S25 at same location.																			
					O2097-S25	0.5	4/15/2016	1.9	Step out 10 ft. and retest	O2097-S35	0.5	4/28/2016	1.0	Step out 10 ft. and retest	O2097-S45	0.5	5/11/2016	1.7	Step out 10 ft. and retest	O2097-S55	0.5	5/20/2016	1.9	Step out 10 ft. and retest	No step-out sample collected due to presence of sample F1654-E60 in same vicinity.				
					O2097-W25	0.5	4/15/2016	0.59	Step out 10 ft. and retest	O2097-W35	0.5	4/28/2016	0.17	NFA															
O1655-E25	0.5	3/31/2016	0.20	NFA																									
O1655-S25	0.5	3/31/2016	1.1	Step out 10 ft. and retest	O1655-S35	0.5	4/15/2016	0.98	Step out 10 ft. and retest	O1655-S45	0.5	4/28/2016	0.62	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2088 in same vicinity.														
O1655-W25	0.5	3/31/2016	1.4	Step out 10 ft. and retest	O1655-W35	0.5	4/15/2016	0.20	NFA																				
O1655-N25	0.5	3/31/2016	0.37	Step out 10 ft. and retest	O1655-N35	0.5	4/15/2016																						

Table 3  
PCB Confirmation Sample Results  
Outside Areas  
Former Agricultural Park, Riverside, California

Outside Area Samples					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest					
Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	
O2137	0.5	4/1/2016	0.35	Step out 25 ft. in 4 directions and retest	O2136-E25	0.5	4/19/2016	0.0287	NFA	O2137-N35	0.5	4/29/2016	0.20	NFA																
					O2136-S25	0.5	4/19/2016	0.11	NFA																					
					O2136-W25	0.5	4/19/2016	0.10	NFA																					
					O2137-N25	0.5	4/19/2016	0.78	Step out 10 ft. and retest																					
					O2137-S25	0.5	4/19/2016	0.33	Step out 10 ft. and retest																					
					O2137-W25	0.5	4/19/2016	0.62	Step out 10 ft. and retest																					
					No east step-out sample collected due to presence of sample O1001-W35 at same location.																									
O2142	0.5	4/1/2016	0.12	NFA																										
O2152	0.5	4/1/2016	ND	NFA																										
O1724-S25	0.5	4/1/2016	0.29	Step out 10 ft. and retest	O1724-S35	0.5	4/19/2016	0.051	NFA																					
O1724-E25	0.5	4/1/2016	0.12	NFA																										
O2186	0.5	4/1/2016	0.13	NFA																										
O1724-N25	0.5	4/1/2016	0.12	NFA																										
O1724-W25	0.5	4/1/2016	0.12	NFA																										
O1723-N25	0.5	4/1/2016	--	Container broke during shipping. Retest.	O1723-N25	0.5	4/13/2016	0.81	Step out 10 ft. and retest	O1723-N35	0.5	4/29/2016	0.083	NFA																
O1723-W25	0.5	4/1/2016	0.14	NFA																										
O1723-S25	0.5	4/1/2016	0.11	NFA																										
O1723-E25	0.5	4/1/2016	0.0287	NFA																										
O1002-W25	0.5	4/4/2016	0.48	Step out 10 ft. and retest	O1002-W35	0.5	4/15/2016	0.52	Step out 10 ft. and retest	O1002-W45	0.5	4/29/2016	0.59	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2147 in same vicinity.															
O1002-N25	0.5	4/4/2016	0.41	Step out 10 ft. and retest	O1002-N35	0.5	4/15/2016	0.14	NFA																					
O1002-S25	0.5	4/4/2016	0.62	Step out 10 ft. and retest	O1002-S35	0.5	4/15/2016	0.31	Step out 10 ft. and retest	O1002-S45	0.5	4/29/2016	ND	NFA																
O1002-E25	0.5	4/4/2016	0.86	Step out 10 ft. and retest	O1002-E35	0.5	4/15/2016	0.52	Step out 10 ft. and retest	O1002-E45	0.5	4/29/2016	0.33	Step out 10 ft. and retest	O1002-E55	0.5	5/20/2016	0.32	Step out 10 ft. and retest	No step-out sample collected due to presence of property fence line.										
O2197	0.5	4/4/2016	0.17	NFA																										
O2147	0.5	4/4/2016	0.44	Step out 25 ft. in 4 directions and retest	O2147-N25	0.5	4/15/2016	0.23	Step out 10 ft. and retest	O2147-N35	0.5	4/29/2016	0.14	NFA																
					O2147-W25	0.5	4/15/2016	0.50	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O1723-E25 at same location.																				
					O2147-S25	0.5	4/15/2016	0.64	Step out 10 ft. and retest	O2147-S35	0.5	4/29/2016	2.7	Step out 10 ft. and retest	O2147-S45	0.5	5/20/2016	ND	NFA											
O2196	0.5	4/4/2016	0.11	NFA																										
O2193	--	--	--	Not sampled due to rock pile.																										
O2194	--	--	--	Not sampled due to rock pile.																										
O2195	0.5	4/4/2016	0.089	NFA																										
O2198	0.5	4/4/2016	0.21	NFA																										
O2199	0.5	4/4/2016	ND	NFA																										
O2201	0.5	4/4/2016	ND	NFA																										
O2200	0.5	4/4/2016	ND	NFA																										
O2202	0.5	4/4/2016	ND	NFA																										
O2203	0.5	4/4/2016	ND	NFA																										
O2205	0.5	4/4/2016	ND	NFA																										
O2204	0.5	4/4/2016	ND	NFA																										
O2207	0.5	4/4/2016	ND	NFA																										
O2206	0.5	4/4/2016	ND	NFA																										
O2208	0.5	4/4/2016	ND	NFA																										
O2209	0.5	4/4/2016	ND	NFA																										
O2211	0.5	4/4/2016	ND	NFA																										
O2210	0.5	4/4/2016	ND	NFA																										
O2212	0.5	4/4/2016	ND	NFA																										
O2213	--	--	--	Not sampled due to rock pile.																										
O2251	0.5	4/4/2016	ND	NFA																										
O2191	0.5	4/4/2016	0.18	NFA																										
O2214	0.5	4/4/2016	0.11	NFA																										
O2250	0.5	4/4/2016	0.14	NFA																										
O2269	0.5	4/4/2016	0.058	NFA																										
O2249	0.5	4/4/2016	0.0173	NFA																										
O2252	--	--	--	Not sampled due to rock pile.																										
O2253	0.5	4/4/2016	ND	NFA																										
O2254	0.5	4/4/2016	ND	NFA																										
O2255	0.5	4/4/2016																												



Table 3  
PCB Confirmation Sample Results  
Outside Areas  
Former Agricultural Park, Riverside, California

Outside Area Samples					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest				
Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ft)	Date Collected	PCBs (mg/kg)	Action
O1705-N25	0.5	4/5/2016	0.47	Step out 10 ft. and retest	O2239-S25	0.5	4/19/2016	ND	NFA	O1705-N45	0.5	4/29/2016	2.2	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2243 in same vicinity.														
O1705-E25	0.5	4/5/2016	0.94	Step out 10 ft. and retest	O1705-N35	0.5	4/20/2016	5.1	Step out 10 ft. and retest	O1705-E45	0.5	5/20/2016	18	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2219 in same vicinity.														
O1705-S25	0.5	4/5/2016	0.53	Step out 10 ft. and retest	O1705-S35	0.5	4/20/2016	0.66	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2237 at same location.																			
O1705-W25	0.5	4/5/2016	2.2	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2239-E25 at same location.																								
O2275	0.5	4/5/2016	1.3	Step out 25 ft. in 4 directions and retest	O2275-N25	0.5	4/20/2016	0.054	NFA																				
					O2275-E25	0.5	4/20/2016	ND	NFA																				
					O2275-S25	0.5	4/20/2016	ND	NFA																				
					O2275-W25	0.5	4/20/2016	ND	NFA																				
O2276	0.5	4/5/2016	ND	NFA																									
O2273	0.5	4/5/2016	12	Step out 25 ft. in 4 directions and retest	O2273-N25	0.5	4/20/2016	0.36	Step out 10 ft. and retest	O2273-N35	0.5	4/29/2016	0.14	NFA	No step-out sample collected due to presence of sample O1719-W25 in same vicinity.														
					O2273-E25	0.5	4/20/2016	0.35	Step out 10 ft. and retest	O2273-E35	0.5	4/29/2016	0.81	Step out 10 ft. and retest															
					O2273-S25	0.5	4/20/2016	0.17	NFA																				
					O2273-W25	0.5	4/20/2016	4.1	Step out 10 ft. and retest	O2273-W35	0.5	4/29/2016	ND	NFA															
O2274	0.5	4/5/2016	0.14	NFA																									
O2183	0.5	4/5/2016	0.19	NFA																									
O1682-N25	0.5	4/5/2016	0.040	NFA																									
O1682-E25	0.5	4/5/2016	0.102	NFA																									
O1682-S25	0.5	4/5/2016	0.247	Step out 10 ft. and retest	O1682-S35	0.5	5/2/2016	0.035	NFA																				
O1682-W25	0.5	4/5/2016	6.72	Step out 10 ft. and retest	O1682-W35	0.5	5/2/2016	1.3	Step out 10 ft. and retest																				
O2178	0.5	4/5/2016	0.023	NFA																									
O2184	0.5	4/5/2016	ND	NFA																									
O2220	0.5	4/5/2016	7.5	Step out 25 ft. in 4 directions and retest	O2220-N25	0.5	4/20/2016	11	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2219-S25 at same location.																			
					O2220-E25	0.5	4/20/2016	0.58	Step out 10 ft. and retest	O2220-E35	0.5	5/2/2016	0.53	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2184 in same vicinity.														
					O2220-S25	0.5	4/20/2016	2.4	Step out 10 ft. and retest	O2220-S35	0.5	5/2/2016	5.5	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2221 in same vicinity.														
					O2220-W25	0.5	4/20/2016	1.5	Step out 10 ft. and retest	O2220-W35	0.5	5/2/2016	0.78	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2237-S25 in same vicinity.														
O2219	0.5	4/5/2016	37	Step out 25 ft. in 4 directions and retest	O2219-N25	0.5	4/20/2016	11	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2218-S25 at same location.																			
					O2219-E25	0.5	4/20/2016	0.061	NFA																				
					O2218-S25	0.5	4/20/2016	3.3	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2219-N25 at same location.																			
					No west step-out sample collected due to presence of sample O1705-E25 at same location.																								
O2218	0.5	4/5/2016	3.0	Step out 25 ft. in 4 directions and retest	O2218-N25	0.5	4/20/2016	1.2	Step out 10 ft. and retest	O2218-N35	0.5	5/2/2016	0.81	Step out 10 ft. and retest	Not able to step out due to a rock pile.														
					O2218-E25	0.5	4/20/2016	0.039	NFA																				
					O2218-S25	0.5	4/20/2016	8.7	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2219-N25 at same location.																			
					O2218-W25	0.5	4/20/2016	8.4	Step out 10 ft. and retest	O2218-W35	0.5	5/2/2016	3.2	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2243 in same vicinity.														
O2243	0.5	4/5/2016	0.046	NFA																									
O2185	0.5	4/5/2016	1.31	Step out 25 ft. in 4 directions and retest	O2185-N25	0.5	4/21/2016	0.11	NFA																				
					O2185-E25	0.5	4/21/2016	0.032	NFA																				
					O2185-S25	0.5	4/21/2016	0.40	Step out 10 ft. and retest	O2185-S35	0.5	5/2/2016	0.41	Step out 10 ft. and retest	O2185-S45	0.5	5/11/2016	0.35	Step out 10 ft. and retest	O2185-S55	0.5	5/23/2016	ND	NFA					
					O2185-W25	0.5	4/21/2016	ND	NFA																				
O2217	0.5	4/5/2016	0.090	NFA																									
O2216	0.5	4/5/2016	ND	NFA																									
O2215	0.5	4/5/2016	ND	NFA																									
O1719-E25	0.5	4/6/2016	1.9	Step out 10 ft. and retest	Could not step out due to a concrete debris pile.																								
O1719-N25	0.5	4/6/2016	0.69	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2248-S25 at same location.																								
O1719-S25	0.5	4/6/2016	0.																										

Table 3  
PCB Confirmation Sample Results  
Outside Areas  
Former Agricultural Park, Riverside, California

Outside Area Samples					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest					Step Out & Retest																				
Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action	Sample ID	Sample Depth (ftg)	Date Collected	PCBs (mg/kg)	Action																
O2505	0.5	4/7/2016	27.4	Step out 25 ft. in 4 directions and retest	O2504-S25	0.5	4/22/2016	0.52	Step out 10 ft. and retest	O2504-S35	0.5	5/10/2016	0.014J	NFA	O2505-E45	0.5	5/11/2016	1.1	Step out 10 ft. and retest	O2505-E55	0.5	5/23/2016	3.3	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2295 in same vicinity.																				
					O2504-W25	0.5	4/22/2016	2.4	Step out 10 ft. and retest	O2504-W35	0.5	5/10/2016	ND	NFA																															
					O2505-E25	0.5	4/18/2016	5.8	Step out 10 ft. and retest	O2505-E35	0.5	5/2/2016	ND	Step out 10 ft. and retest																															
					O2505-S25	0.5	4/18/2016	0.011J	NFA	No step-out sample collected due to presence of sample O2505-S25 at same location.																																			
					O2505-N25	0.5	4/18/2016	2.9	Step out 10 ft. and retest	O2505-W35	0.5	5/2/2016	0.24	Step out 10 ft. and retest												No step-out sample collected due to presence of sample O2324 in same vicinity.																			
O2288	0.5	4/7/2016	0.39	Step out 25 ft. in 4 directions and retest	O2288-S25	0.5	4/25/2016	0.53	Step out 10 ft. and retest	O2288-E25	0.5	4/25/2016	0.13	NFA	O2289-E25	0.5	4/7/2016	21.1	Step out 25 ft. in 4 directions and retest	O2289-S25	0.5	4/22/2016	7.0	Step out 10 ft. and retest	O2290-N45	0.5	5/23/2016	31	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2506 in same vicinity.															
					O2288-W25	0.5	4/25/2016	0.53	Step out 10 ft. and retest	O2288-N25	0.5	4/22/2016	16	Step out 10 ft. and retest																	O2290-N35	0.5	5/10/2016	0.33	Step out 10 ft. and retest										
					O2289-S25	0.5	4/22/2016	0.92	Step out 10 ft. and retest	O2290-E35	0.5	5/10/2016	0.13	NFA																															
					O2289-E25	0.5	4/22/2016	0.19	NFA	No step-out sample collected due to presence of sample O2288-N25 in same vicinity.																																			
					O2289-W25	0.5	4/22/2016	2.5	Step out 10 ft. and retest	O2290-S25	0.5	4/22/2016	0.49	Step out 10 ft. and retest																	O2290-W35	0.5	5/10/2016	1.6	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2318-E25 in same vicinity.									
O2506	0.5	4/7/2016	0.119J	NFA	O1691-S45	0.5	4/25/2016	0.98	Step out 10 ft. and retest	O1691-S45	0.5	5/10/2016	0.35	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O1690-N60 in same vicinity.																														
																O1691-N25	0.5	4/7/2016	0.025J	NFA																									
																O1691-E25	0.5	4/7/2016	0.047	NFA																									
																O1691-W25	0.5	4/7/2016	1.6	Step out 10 ft. and retest	O1691-W35	0.5	4/25/2016	2.6	Step out 10 ft. and retest	O1691-W45	0.5	5/10/2016	24	Step out 10 ft. and retest	O1691-W55	0.5	5/23/2016	25	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2506 in same vicinity.									
																O1711-N25	0.5	4/7/2016	0.16	NFA	O1711-E25	0.5	4/7/2016	0.019J	NFA	O1711-S25	0.5	4/7/2016	0.017J	NFA	O1711-W25	0.5	4/7/2016	0.96	Step out 10 ft. and retest		O1711-W35	0.5	4/25/2016	0.49	Step out 10 ft. and retest	O1711-W45	0.5	5/10/2016	10
O2295	0.5	4/7/2016	0.054	NFA	O2300-N45	0.5	4/25/2016	1.078	Step out 10 ft. and retest	O2300-N35	0.5	5/10/2016	1.1	Step out 10 ft. and retest	O2300-N45	0.5	5/23/2016	0.24	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O1712 in same vicinity.																									
																					O2300-E25	0.5	4/25/2016	1.366	Step out 10 ft. and retest	O2300-E35	0.5	5/10/2016	3.9	Step out 10 ft. and retest	O2300-E45	0.5	5/23/2016	0.083	NFA										
																					O2300-W25	0.5	4/25/2016	9.8	Step out 10 ft. and retest	No south step-out sample collected due to presence of sample O1711-N25 at same location.																			
																					O2301	0.5	4/7/2016	0.10	NFA	O1731-N25	0.5	4/7/2016	0.18	NFA	O1731-E25	0.5	4/7/2016	0.14	NFA	O1731-S25	0.5	4/7/2016	0.41	Step out 10 ft. and retest	O1731-S45	0.5	5/12/2016	0.21	NFA
																					O1731-W25	0.5	4/7/2016	0.012J	NFA	O2322-N25	0.5	4/25/2016	2.2	Step out 10 ft. and retest	O2322-N35	0.5	5/12/2016	0.76	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2323 in same vicinity.									
O2322	0.5	4/7/2016	9.89	Step out 25 ft. in 4 directions and retest	O2322-E25	0.5	4/25/2016	5.9	Step out 10 ft. and retest	O2322-S25	0.5	5/12/2016	8.4	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O1735-W25 in same vicinity.																														
					O2322-S25	0.5	4/25/2016	5.52	Step out 10 ft. and retest	O2322-S35	0.5	5/12/2016	8.4	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2314-N25 in same vicinity.																														
					O2322-W25	0.5	4/25/2016	0.25	Step out 10 ft. and retest	O2322-W35	0.5	5/12/2016	0.17	NFA																															
					O2323	0.5	4/7/2016	0.137J	NFA	O2325	0.5	4/7/2016	ND	NFA	O2326	0.5	4/7/2016	0.010J	NFA	O2327	0.5	4/7/2016	ND	NFA	O2328	0.5	4/7/2016	ND	NFA	O2329	0.5	4/7/2016	ND	NFA	O2330	0.5	4/7/2016	0.169J	NFA						
					O2331	0.5	4/7/2016	8.0	Step out 25 ft. in 4 directions and retest	O2331-N25	0.5	4/25/2016	21	Step out 10 ft. and retest	O2331-E25	0.5	5/12/2016	0.72	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2504-S25 in same vicinity.																									
O2332	0.5	4/7/2016	ND	NFA	O2331-E25	0.5	4/25/2016	4.9	Step out 10 ft. and retest	O2331-S35	0.5	5/12/2016	4.8	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2330 in same vicinity.																														
					O2331-S25	0.5	4/25/2016	7.3	Step out 10 ft. and retest	O2331-W25	0.5	4/25/2016	0.66	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2503-N25 in same vicinity.																														
					O2332-N25	0.5	4/25/2016	0.018J	NFA	O2332-E25	0.5	4/25/2016	3.1	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O1735-N20 in same vicinity.																														
					O2332-S25	0.5	4/25/2016	0.049	NFA	No east step-out sample collected due to presence of sample O2505-W25 at same location.																																			
					O2501	0.5	4/7/2016	1.44	Step out 25 ft. in 4 directions and retest	O2501-N25	0.5	4/18/2016	2.8	Step out 10 ft. and retest	O2501-N35	0.5	5/2/2016	0.88	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2503-S25 in same vicinity.																									
O2501	0.5	4/7/2016	1.44	Step out 25 ft. in 4 directions and retest	O2501-E25	0.5	4/18/2016	7.4	Step out 10 ft. and retest	O2501-E35	0.5	5/2/2016	0.14	NFA	O2501-E35	0.5	5/2/2016	0.14	NFA	No step-out sample collected due to presence of sample O2502-N25 at same location.																									
					O2501-S25	0.5	4/18/2016	0.43	Step out 10 ft. and retest	O2501-W25	0.5	4/18/2016	43	Step out 10 ft. and retest							O2501-W35	0.5	5/2/2016	1.9	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2332 in same vicinity.																			
					O2501-W25	0.5	4/18/2016	43	Step out 10 ft. and retest	O2501-W35	0.5	5/2/2016	1.9	Step out 10 ft. and retest							No step-out sample collected due to presence of sample O2332 in same vicinity.																								
					O2501-E25	0.5	4/18/2016	7.4	Step out 10 ft. and retest	O2501-E35	0.5	5/2/2016	0.14	NFA																															
					O2501-S25	0.5	4/18/2016	0.43	Step out 10 ft. and retest	O2501-W25	0.5	4/18/2016	43	Step out 10 ft. and retest							O2501-W35	0.5	5/2/2016	1.9	Step out 10 ft. and retest	No step-out sample collected due to presence of sample O2332 in same vicinity.																			

Notes: NFA = No further action. Result is <0.22 mg/kg.  
mg/kg = milligrams per kilogram  
ftg = feet below grade

